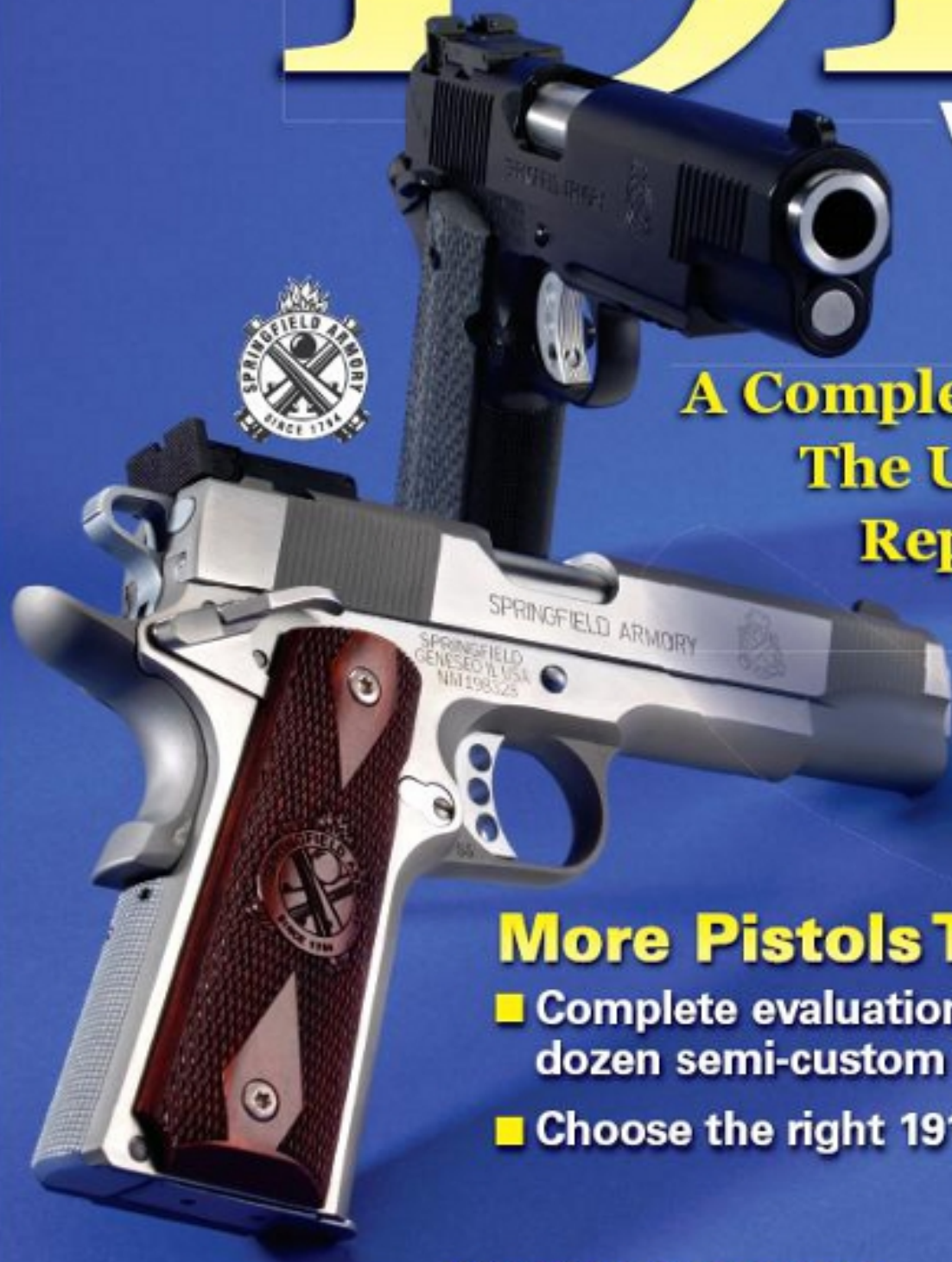


The Gun Digest® Book of

The 1911

Volume 2



**A Complete Look At
The Use, Care &
Repair Of The
1911 Pistol**

More Pistols Tested

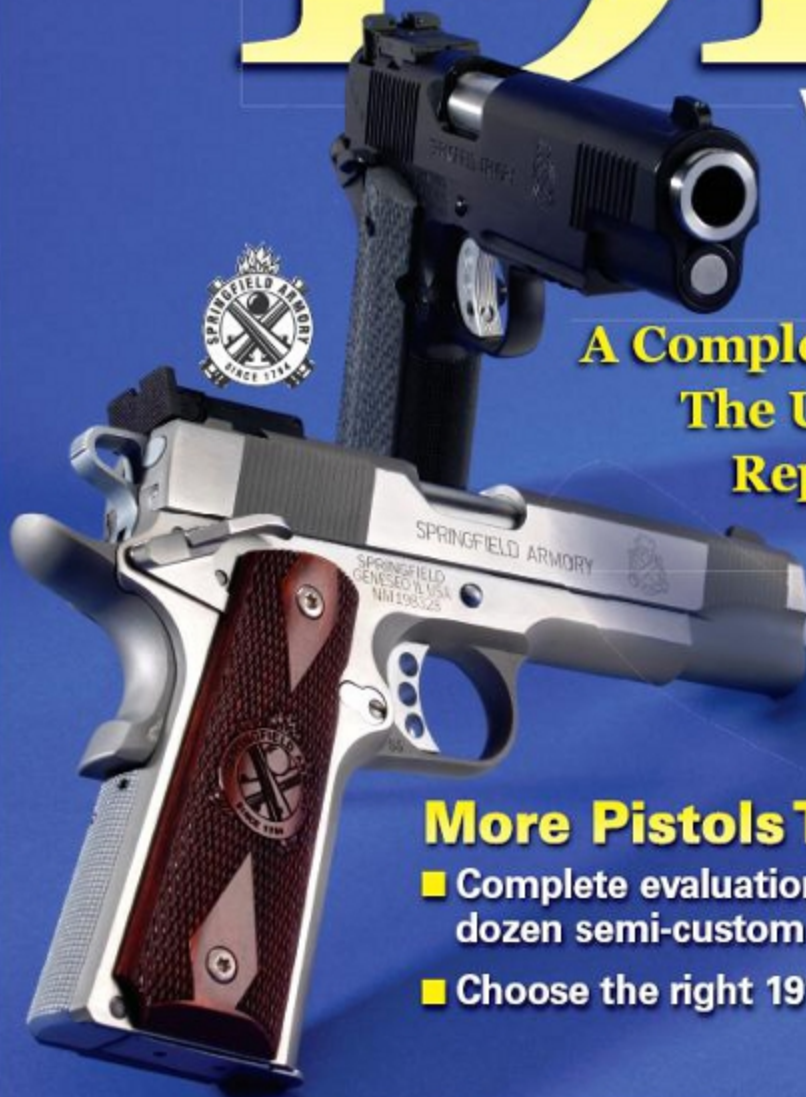
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About The Covers

Front Cover

With a long history of making some of the finest 1911 pistols available Springfield Armory continues to serve private citizens and the law enforcement community with pistols that set the standard for performance and accuracy. Displayed on the front cover are the TRP Light Rail with Springfield's Armory Kote finish and a stainless steel Custom Loaded model.

The TRP Light Rail is built to the same specifications as the FBI contract pistol and comes with a 5-inch bull barrel and adjustable night sights. The Custom Loaded model is available with a wide variety of features usually installed as aftermarket parts by custom gun-makers. Both live up to the exacting standards of Springfield Armory.



Back Cover

efore for Bill Wilson became a custom gunsmith he was, first and foremost, a shooter. His ideas on what makes a great pistol and his attention to detail have made him a household word in the world of 1911 pistols. Shown on the back cover, Wilson Combat's CQB (Close Quarters Battle) and Classic 1911 pistols represent the finest in craftsmanship and reliability. The CQB offers tritium inserts to aid in low-light shooting and stree-proven features light a high-ride beaver-tail grip safety and tactical magazine release. The Classic is just that, a pistol that offfers the timeless look of

B the 1911 with some of the best features Wilson Combat has to offer, including a low-mount adjustable rear sight. As always, Wilson Combat pistols come with an accuracy guarantee.



Foreword

As the 1911 pistol approaches the century mark, it is still looked at by many as the standard to which other pistols are compared. So great is the popularity of this design that it has spawned an entire industry of aftermarket accessories, parts and various other goods and services. The desire for information about the 1911 pistol and its component parts is evident throughout the firearms community. There is always someone learning something new about the 1911 and passing that information to the throngs of dedicated shooters.

To that end, this book is not designed to replace Volume 1 of the Gun Digest Book of the 1911, on the contrary, this is a companion volume that offers new insight, more tests and further information about the most popular firearm ever designed. If you use a 1911 for sport, recreation or self-defense, this book will expand your knowledge and open your eyes to all the things the pistol can do and many of the things you can do to the pistol. So far, the options are almost endless.



Acknowledgments

I'd like to thank all of the manufacturers who sent stuff, in particular Bill Laughridge, who not only sent stuff but answered questions. Kristi Hoffman of Black Hills was once again generous in the extreme. The whole staff at Black Hills is ultra supportive.

Dave Skinner as usual sent me more than I asked for. He also doesn't ask for it back on any kind of a schedule. I suspect he likes asking me at matches "So how is that gun doing?" When I ask him "Which one?" he laughs and says "Whatever the latest one I sent you is." Unlike some makers, who make me work to get a gun, or who say: "We need that back in two weeks/30 days so we can send it to the next gun writer. It is the only loaner we have" Dave will send me anything he has. So will Kimber, (thanks Dwight Van Brunt), Caspian (thanks Gary Smith) Para Ordnance (thanks Kerby Smith) Olympic (thanks, Tom Spithaler) Wilson Combat (Bill Wilson) and Blade-Tech (Carla Power and Bobby McGee). Halfway through the project, as it seemed I might actually run low on ammo, Ivan Walcott of Armscor came to the rescue. One thing you have to be aware of, is that Armscor believes the old specs are plenty good enough for .45 ACP. You know, the old "230 at 815 fps" specs you read on ancient boxes of ammo. They must, for their ammo produced Power Factors from 190 to 195. Man, this would have made nice bowling pin ammo back in the days of Second Chance.

That's not to say the other manufacturers weren't forthcoming, just that some companies seem to have selected their P.R. people for a reflexive need to ship guns, ammo and gear to gun writers.

As always, I could not have done the work without my crew of volunteers, who selflessly sacrifice their time and skills to shoot free ammo through expensive loaner guns. As more than one has been noted to say; "It's a dirty job..."

I have to mention Baxter. A bumper sticker I once saw sums it up: "Dear Lord, please let me be the kind of person my dog thinks I am." Baxter patiently waited at the gun club, in the truck or the clubhouse,

through endless days of test firing, photography and general fooling around. He's gone now, too soon, but when he was there he was always happy to run the length of the 100-yard range to make sure there weren't any squirrels foolish enough to contest his ownership of the range. And through this and all the other books I must thank Felicia. Some married men make jokes about "the better half." I don't joke, for Felicia is. She taught me how to write, and how to re-write. She's still trying to teach me how to keep the office neat, but I fear that is a never-ending task. Good for me she's here for the long haul.

Last, you; the patient reader. I'm still amazed that not only do people find my writing informative, entertaining and interesting, but that people are actually willing to pay for it. Some days I think all of us gun writers have simply died and gone to heaven.

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Introduction

Well, it was something we just had to do. Since the first book there have been advances in 1911 technology (hard to imagine with something nearly a century old, but true) and there are more makers than ever. Some of those we covered in Volume one are gone. The AMT operation folded, not through any lack of quality guns. Others folded precisely due to a lack of quality.

As I did in Volume One, I tested everything I could lay my hands on. Some of the tests will be new products from makers you saw in the first book, and others will be newcomers to our inquiries. I made a pest of myself, and managed to lay my hands on some really primo guns. And I failed in getting my hands on others. All I can say is, I tried.

Readers are always of two minds on several aspects of testing. One group is firmly convinced that gun writers get special guns, tuned and tested, that the factory fusses over before shipping. As if! One maker sent me a show gun. I found out at the range that it had a clipped firing pin, too short to set off primers. I had to strip one of the other guns to get a firing pin into it that worked. Other makers sent guns lacking a magazine. Now on a project like this, that's not a problem. After all, I own a couple of hundred magazines for the various platforms and calibers of the 1911, so I was able to supply magazines of my own to get things going. But imagine trying to test something more exotic, and finding the box to contain gun but no magazine. Other readers simply assume (correctly) that gun writers get the first gun off the inventory shelves that the Marketing Department orders shipped.

Ammunition is always a concern. You can "prove" anything with the correct selection of ammunition. I can prove that the best 1911 out there is an unreliable, festering pile of fly-ridden cow flop by feeding it certain batches of ammunition. Certain low-quality ammunition. I can turn an average-accuracy gun into a stellar performer if I only "test" it with the brand or lot of ammo it really likes and only choose to record or photograph the best group. I try to test with as much different ammo as I

can get, using Black Hills as the standard against which all others are measured. If a gun won't reliably work with plain old ball ammo from Black Hills, then something's up. I also do not "cherry-pick" groups. I don't throw out the obvious flyer in an otherwise good group. I don't drop a bad group from the average, and I don't expect every gun to be a superb shooter. There are a lot of graves out there filled with people who were killed by guns that were only casually accurate. And yet a lot of bad guys (and good) have been dropped with "inaccurate guns, and a lot of freezers have been filled with deer and elk shot by rifles and handguns that weren't bull's-eye-accurate. So you'll be reading a lot of accuracy reports that may puzzle or outrage you. "Three inches from a Ransom rest? That stinks! Why, my competition gun does under an inch all day long." I'm sure it does. And I'm sure you either tested until you found the ammo it likes or you loaded the ammo it likes. If you're shooting in the Bianchi Cup, it matters. If you're shooting at the monthly club practical match, or carrying concealed, a gun that shoots 5 inches at 50 yards is just as good as one that shoots half an inch at 50 yards. At the short distance and in the compressed timeframes you'll be using it, the accuracy difference between those limits won't be a factor.

Some readers assume gun writers are superb, nay, brilliant shots, who can product one-hole groups on demand. (Pardon me, but I just had to wipe snorted coffee off the computer screen upon re-reading that.) If we were that good, we'd all be shooting in matches with Robbie Leatham, Dave Seigny, Todd Jarrett or Jerry Barnhart. We'd be contesting with Doug Koenig for the Bianchi Cup trophy. I know all those guys, and I can even say that at one time or another I've beaten them all. Well, except for Dave. He only shoots Glocks, and I've never shot Production against him. But give me time, and I'm sure I could beat him on at least one stage. Which proves nothing. Gun writers write mostly because they are good at writing. Being good at shooting is a bonus, if that particular writer happens to be good. (Some aren't.) If I want to know how accurate a particular handgun is, I'll either clamp it in the Ransom rest, or ask a better shooter to shoot it over sandbags for me. However, I cannot get Robbie, Dave, Todd, or Jerry to sit down and shoot half a dozen groups with each load out of each gun, to

see how well the guns do. I can ask, but we all know what the answers are likely to be.

Some, more cynical readers figure that gun writers are great shots because they do all their shooting with their typewriter. (Word processors in today's world.) I've known some who would shoot a group, call it the "average" and send in an article. Editors figure out pretty quickly who they are, and unless the writing is brilliant and compels readers to snatch issues off of the newsstands, Editors eventually stop asking such authors for articles. Me, I spend entirely too much time at the range. If the clubhouse at my gun club had a shower, I'd be tempted to pull overnights, just to get the travel time per range trip down.

The last aspect of writing that some readers just can't reconcile is that writers love every gun they write about. I don't know about the others, but I've gotten some lemons: The revolver where the trigger stuck in the rearward location. It was double-action all right: one press to fire, and another to push it back forward to try again. Or the pistol where the recoil spring assembly launched itself at the targets while I was shooting. Ammo where bullets set back into the case on feeding. Or magazines that wouldn't hold as many as they were rated for, wouldn't hold the correct caliber, or wouldn't stay assembled when loaded. But I do not have time to list all the stuff that went wrong. The manufacturers of those products will either fix them, or soon go out of business. How interesting would it be to read a book devoted to businesses no longer in business, making products that didn't work? "Not very" is my guess.

That said; I was pleasantly surprised at how well the guns I tested worked. Manufacturers in general, and of the 1911 in particular, know competition is tough. The marketplace both rewards and punishes. The old days of spending a pile of money to buy a gun just to then send it off to a gunsmith to get the gun rebuilt are long gone. Consumers expect at least a modicum of function for their money, even if they fully intend to get their 1911 rebuilt anyway. Many fully expect to simply buy what they need and not get customizing work done, and will pay enough more that makers now make 1911s to that standard. It is now plenty easy to simply purchase the 1911 you need, whether for carry, competition or just going to the range for fun.

A careful reader might get the impression that I am fond of the 1911. You'd be correct. While I initially learned to shoot on single action revolvers, I found I much preferred the 1911 for everything except bone-crushing power. For speed, accuracy, enough power, durability, availability and ease of use, I would be hard pressed to find something better. Other shooters and writers might disagree, and that's the beauty of the modern capitalist system: we can disagree, still have our opinions and products, and learn from each other.

The guns in Volume One were much the same: single-stack guns good for Limited 10 in USPSA, or carry or IDPA matches in CDP Division. For Volume Two I tried to spread things a bit. We have compacts like the Detonics. We have high-caps like the Armscor. I tested 9 mm, .38 Super, 40 and 10 mm as well as .45 ACP.

Until I win the lotto (which I rarely play, and then only for entertainment purposes) a project like this is dependant on the manufacturers for assistance. I can't go out and buy everything I'm going to test. I have to ask the manufacturers to send me the guns, gear and ammo. The guns and gear, the manufacturers get back. (Another one of those things people don't believe about gun writers) The ammo goes downrange. Some rare calibers my test crew pocket samples of. Back in the S&W book, I got about half the .500 S&W ammo and brass back. Every tester who shot it pocketed a loaded round and a fired case. Well, in this book it isn't such a problem. They all have a plentiful supply of 9 mm and .45 ACP brass at home, and a few empties won't make any difference. If I turned my back the five-gallon bucket of brass might disappear, but the lads know they might not get invited back, so they restrain themselves.

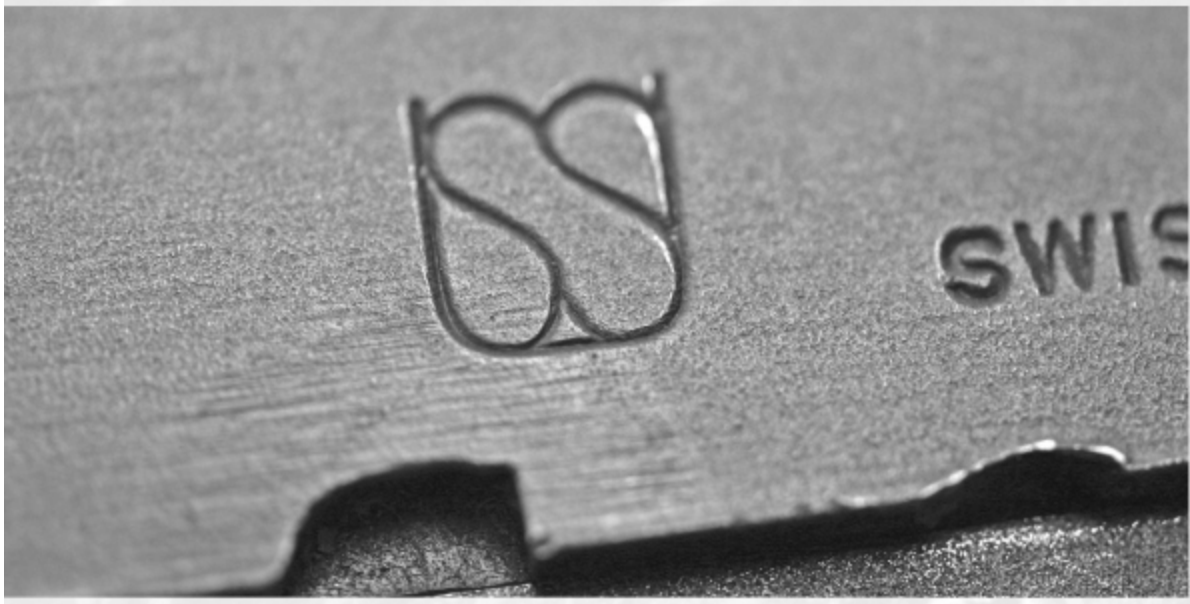
Chapter 1

Advances in the 21st Century

I have to start off the second volume on the 1911 with a grumble: Words mean things. Modern marketing has so changed, distorted and altered the English language that “up” means down, and “bad” is good. The first one to grumble over is “Classic.” By the dictionary I learned from ‘lo these many years ago, classic was “an object, tool process or method that had stood the test of time.” Today, last years model of an appliance, computer, or soft drink is a “classic.” B-S. The second grumble is “tactical.” As in pertaining to tactics? No. As in something to do with a process, method, or reactive system to a threat? Sometimes, but not often. No, “tactical” today often means whatever the mall ninjas want it to. Usually, something that in an earlier age would have been called “cool.” Some in the firearms, equipment and training businesses look at each other knowingly and smile a slight smile when hearing the word “tactical” uttered. I’ve heard more than one person remark “If you paint it black and put some Velcro on it, you can sell it to cops.” Now so it is with “tactical.” Some people will buy anything if you earnestly tell them it is tactical. Some in the industry even make fun of it: Blackhawk, with a great big smirk, calls their coffee cups “tactical caffeine delivery systems.”

You want Classic? How about a firearm that has been around essentially unchanged for (as I write this) ninety-four years? Which has not only shrugged off competitors, but is now seeing a resurgence of use? How about the .45 ACP cartridge, which is still the standard against which all other defensive cartridges are compared? The 1911 pistol is strong not from the use of exotic alloys, but strong as the Mauser bolt-action rifle is strong, from design. You can make a 1911 with greater longevity if you use alloy steels and involved heat-treatments, but you don’t have to. The government proved that with the WWII-production guns. They had minimal heat-treatment, most only had the locking lugs on the slide hardened in any way,

and many are still in use today. On Okinawa during the invasion, the average life expectancy of a Second Lieutenant was 30 days. Given that most 1911s issued to those officers would disappear into the destructive maw of war, why should the manufacturer have spent any more time in heat-treating it than absolutely needed? And yet they still work.



A classic design makes the 1911 great, but new and improved steel makes the pistols even better.



The big advances in handgun use have been as much on the user end as pistol design. Fifty years ago you'd have been hooted off a range shooting this way.

Today you can buy or build a 1911 with alloy steels and improved heat-treatment, one that given proper maintenance will outlast both you and your heirs.

In the world of tactical, tactical is that pertaining to the development, use, teaching and utilization of tactics. Not just gear. In the close fight, what is tactical is that you make the bad guys either cease their bad activities, or be unable to continue them. If the use of a handgun is called for, the quick cessation of bad activities is a good thing. The longer bad guys keep doing bad things, the worse it is for you and the rest of the good guys. However, you can have too much of a good thing. We can all agree that a handgun chambered in 12-gauge, loaded with 00 buckshot, would be a more effective fight-stopper than a “mere” .45 ACP. However, getting the “hand-shotgun” into use would be difficult. (We won’t even go into the legal

difficulties of obtaining or building such a beast, or the recoil problems.) Anything you built or bought that could be effectively utilized would be so bulky it wouldn't be much more use than a rifle or shotgun. Or, it would be compact, but no one would dare shoot it more than once.

A tool must be handy or it isn't useful. Carpenters use powered nailguns because they are compact, and can be handled with one hand. If nailguns took both hands and a backpack powerpack, carpenters would still be using hammers. Thus it is with a sidearm. You don't go into a fight with a handgun, not if you have any other choice. Or common sense. Often a handgun is what's left after all the other tools have run out, been broken or lost. A handgun that is too heavy, bulky or has too much recoil isn't a useful emergency tool.

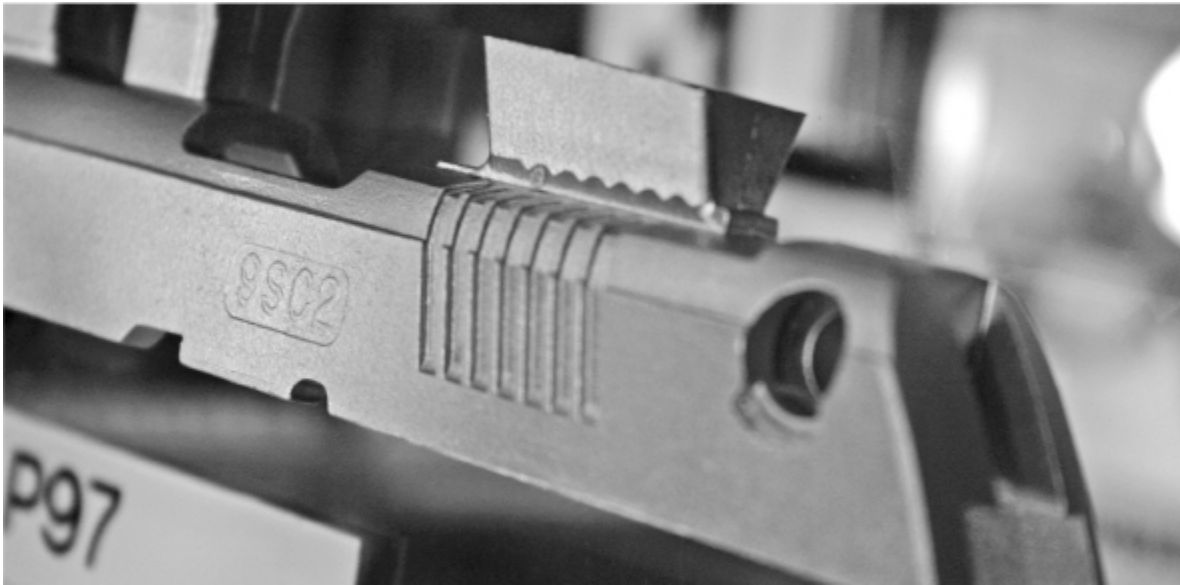
Marine Lt. Brian Chontosh gave a demonstration of when you use a handgun, in Iraq in 2004, leading a patrol up Highway 1. The patrol was ambushed, and the Lieutenant ordered his Humvee driver to flank the ambushers. The M2HB gunner shot the machinegun emplacement that was firing directly on his Humvee, and when the vehicle crashed into the enemy trench, the Lieutenant bailed out. And attacked. He went down the length of the trench, firing his M-16 until he had exhausted his ammo. Then he pulled out his sidearm and continued. (A Beretta M9, but we're talking tactical use of a sidearm here.) When that ran out, he began picking up dropped AK-47s. You use your handgun either because it is the only thing you're carrying, or the bigger things you're carrying have stopped working. In the words of John Farnam, long-time firearms instructor and tactician "The number one cause of weapon malfunction is running out of ammo."

There are more manufacturers of the 1911 than ever before. When I was writing the first volume, I would not have thought it possible that even more manufacturers could get into "the game", but there are. And not just small companies making custom guns. Big names in the handgun biz, names you would never have associated with the 1911; SigArms, S&W, Taurus, are now making one or more versions of the best gun ever designed. And the models they offer, and the options you can have, are greater than ever. We have 1911s made of exotic alloys. Not just high-chrome steel, but titanium, scandium-laced aluminum and polymers. You have more choices than ever in caliber. You can go from a .17 on the small end to a .50 on the

big end. There are more sights, magazines, grips, and finishes than you can shake a stick at. And there are more competitions than ever where a 1911 is not just another gun, but often the one you want to be using if you expect to win. And in police departments across the country, and in foreign lands where we expect our men and women to protect us before danger gets here, the 1911 is being asked for more and more. More than before I get requests from officers in departments asking how to convince their chief or sheriff to allow the department to carry a 1911. The various branches of the military are hearing (whether they like it or not) that many of the troops on the sharp end want something better than a 9mm. Something more like, or better yet exactly like, the 1911. By the time this book hits the bookshelves, the Department of Defense may have gone full circle. Or at least as much of a circle as the inhabitants of the big five-sided building can bring themselves to admit. The new sidearm will almost certainly have an accessory rail, will probably be .45 ACP, use a single-stack magazine, and may be the old “cocked and locked” trigger mechanism. It may be some trick DAO variant or derivative of the Para LDA, or a Glock-ish or Springfield XD trigger. That would be the bureaucratic, and stupid, thing to do. As much as I respect those pistols and their trigger mechanisms, they have not been studied, debugged, worked on, adjusted and modified like the original 1911 trigger mechanism has. Yes, Glock has made several trainloads of their pistol, and knows a whole lot about how it works. But a lot of that knowledge is proprietary, and not common knowledge.



Firearms used to be made from forgings. Now a lot of the preliminary work is done via castings.



A good caster can design in a lot of the features that used to require extensive machining.

The manufacturing abilities of the makers have improved by leaps and bounds even in the last few years. In the old days a manufacturer would set up a plant to make firearms. There would be rows and rows of lathes and mills. Each machine would have an operator. Each machine would have a fixture, where a piece of metal would be held for one, two or three machine operations. And the object of their attentions would have been a forging, a lump of steel heated red-hot and hammered in a huge hydraulic press. Now, those parts can be machined from bar stock, plates, castings, even created by moulding and heating, called MIM. Now, CNC machines are common. The cost had dropped so much, and availability so increased, that even small shops can own a CNC machine. And there, the machine can do a whole host of machine operation on one part. Sometimes every machine operation, swapping cutting tools as it goes. With some sort of auto feed, a machine can work overnight, or twenty-four hours a day, with minimal attention from its minder. Once machined, they need only be deburred and sent off for finishing, plating, heat-treating or whatever is left to produce a finished part.

CNC machines also machine to tighter and more repeatable tolerances than individual machines and fixtures. The end result is tighter slide-to-frame fits, better barrel fits and more accuracy.

Smaller parts are made via the wire EDM process or MIM, producing small parts of excellent (or perfect) dimensionality at less cost than the old forged and machined parts. The modern 1911 looks identical in many respects to the older guns. But in almost every iteration, in almost every way, they are better. Tolerances are tighter, accuracy and reliability are better, in some ways my job is more boring. If, when I started this volume you had told me I would shoot a truckload of guns, feed them a ton of ammo, and none of them would fail, I'd have said you were crazy. Put any model out there, and the chances of going through tens of thousands of rounds without failure is small. If each object of that model came from a different maker, the chances of failure go up. In the phrase Charlie Petty once uttered (and probably has more than once, it's a good phrase) "Reliability testing was a waste of good ammunition." Except here it wasn't a waste. I and my test crew got to do some practice, and we learned things along the way that can only be learned from doing. In the realm of useful phrases, I learned one many years ago in college: "If we knew what the answer was, it wouldn't be research." If I had known before starting the success rate would not be high, but be 100%, you couldn't really call it research, could you? It would be plinking, subsidized by the guns and ammo makers.

Well, we plinked for all we were worth. And you get the benefits.

Chapter 2

Barrels

The whole point of a rifled barrel is accuracy. But, as with so many things in life, you can't get something for nothing. Oh, you can get a lot for very little, but it still all costs. And accuracy costs more than most things. First of all, if you expect accuracy, you have to use good ammo. Do not expect your high-dollar custom 1911 to shoot one-hole groups with ammo obtained from "Bob's House of Low-bidder Gear." Yes, you might get lucky with this or that import, or some lot of surplus or reloads, but if you expect the same performance from the next production batch of that ammo, boy have I got a deal for you. You need not break the bank buying only factory-new, premium ammo. But you do have to spend something. However, good ammo is not hideously expensive. If you are willing to invest in a reloading setup, and spend some time learning the process, you can produce match-quality ammo at the rate of 400 rounds an hour, and for about \$75 per 1,000 rounds.

But now we come to the gun. An accurate 1911 is one that has a straight, smoothly-finished bore, in a barrel that locks up consistently to the slide. If the slide runs and locks up consistently on the frame, well that's a bonus. But the barrel-slide fit is what matters. If the barrel locks up consistently to the slide, and you're aiming the slide, then even a gun that seems loose can shoot well. Competition guns with scopes bolted to the frame are much more dependant on a good slide to frame fit, which is one reason why a good USPSA/IPSC Open gun costs more than other 1911s.

But what does the barrel lock up on? Where does it bear? What is a "good fit?" How complicated can it be? If everything goes well, quite simple. And if not, devilishly complicated. Bill Laughridge, the owner of Cylinder & Slide, teaches a week-long 1911 customizing class. In the class, students build a 1911 from a box of parts. He found that the barrel fitting part of the class took so much time it was tough to get guns finished, and students instructed, in one week. So he split the barrel-fitting portion of the

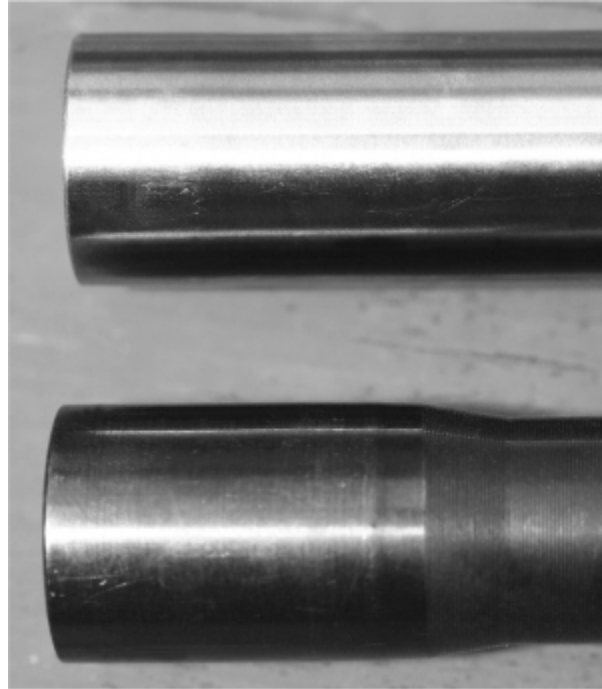
class off into its own class. Which takes two full days. As I said, if everything goes right, you can fit a barrel in fifteen minutes. If not, you could be at it for a whole day.

Before we dive into barrel fit, perhaps we should take a walk around a barrel, just so we all are speaking the same language. (You'd be surprised at what some people call some parts of the barrel. And even before it starts malfunctioning.) While we're at it, we'll discuss what those parts do as they function.

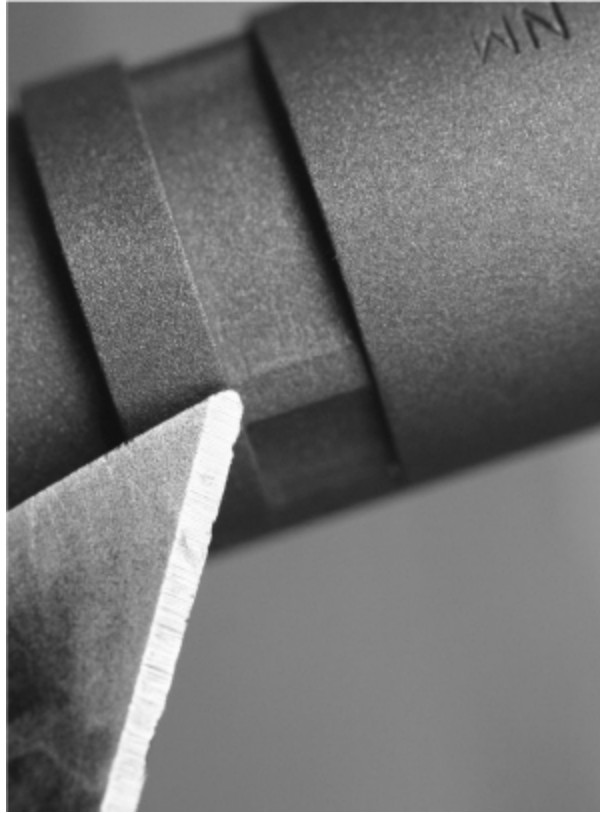
The barrel is at its heart a tube with spiraled grooves cut or pressed into its interior. Out at the front is the muzzle, with the crown. The muzzle is the open end, where the bullet exits, while the crown is the particular portion of the front face that comes down to and meets the rifled bore. A clean and perpendicular crown is important. If it is uneven, rough or dented, the bullet will not have a good start in its brief life. The meeting edge of the crown and bore is the important part. If it is rough, nicked, dented or uneven, the propelling gases will jet out at the first gap. The jet can create stability problems for the bullet. Why do some gunsmiths cut the crown as an inverted cone, or deeply round the crown? To protect that edge. By recessing the edge they can protect it from wear (holster, mostly) and impacts. In an ideal world, a crown that was simply a lathe-cut perpendicular face would work. But in our non-ideal world, the first impact on that crown would dent or otherwise mar it, harming accuracy.

Back of the crown is the barrel tube itself. On older guns, and on basic, non-fitted guns, the barrel diameter is the same all the way back to the locking lugs. At least on .45s. On a lot of 9 mm 1911s, the barrel bushing area is a large diameter, and the barrel is tapered down to a smaller diameter soon after, back to the locking lugs. The fit of the barrel to bushing can have a big impact on accuracy. But a tight bushing can create drag, something not needed for the full stroke of the slide travel. Clever gunsmiths in the old days would tightly-fit a bushing and then polish, draw file or lathe-turn the barrel diameter behind the bushing so it was slightly smaller. The 9 mm barrels were made smaller to lighten them. The 9 mm doesn't have the power, and the smaller size of the casehead creates less thrust, so to ensure reliable function many makers turn the 9 mm barrel down to lessen the unlocking mass. Colt even lightened the slide internally, to lessen the

cycling mass as well. Where this method of barrel design was really picked up was the abortive Colt collet bushing. They made a special bushing with spring fingers that clamped down on a bushing diameter made a lot larger than the barrel shaft diameter. The idea was to use the spring fingers to center and hold the barrel, without the need for hand-fitting of a tight bushing. When it worked it worked just fine. But some guns broke the fingers. It seems the bushing was really stressed when some dimension or another was slightly out of spec, and Colt hadn't taken that into account. In the age before CNC machining, perhaps they could not have. With the CNC mills and lathes of today, it would be easy enough to make sure the dimensions worked out so the collet bushing fingers would not break. Of course it is even easier to just make a regular bushing that is a snug fit and avoid all the collet bushing silliness. The breaking fingers of the collet bushing would not have been a problem except that when they broke they stopped the gun cold. Sometimes it took surgery to get the gun apart and replace the bushing. When Bar-sto was making barrels in the early days, they also tried the collet bushing system. They ended up dropping it. It seemed that too many owners, when taking the gun apart to clean it, insisted on taking the bushing off the barrel. Yanking it off, and prying it back on, was very stressful, and collet fingers broke. Bar-sto finally just threw up their hands, and started shipping barrels with regular bushing again.



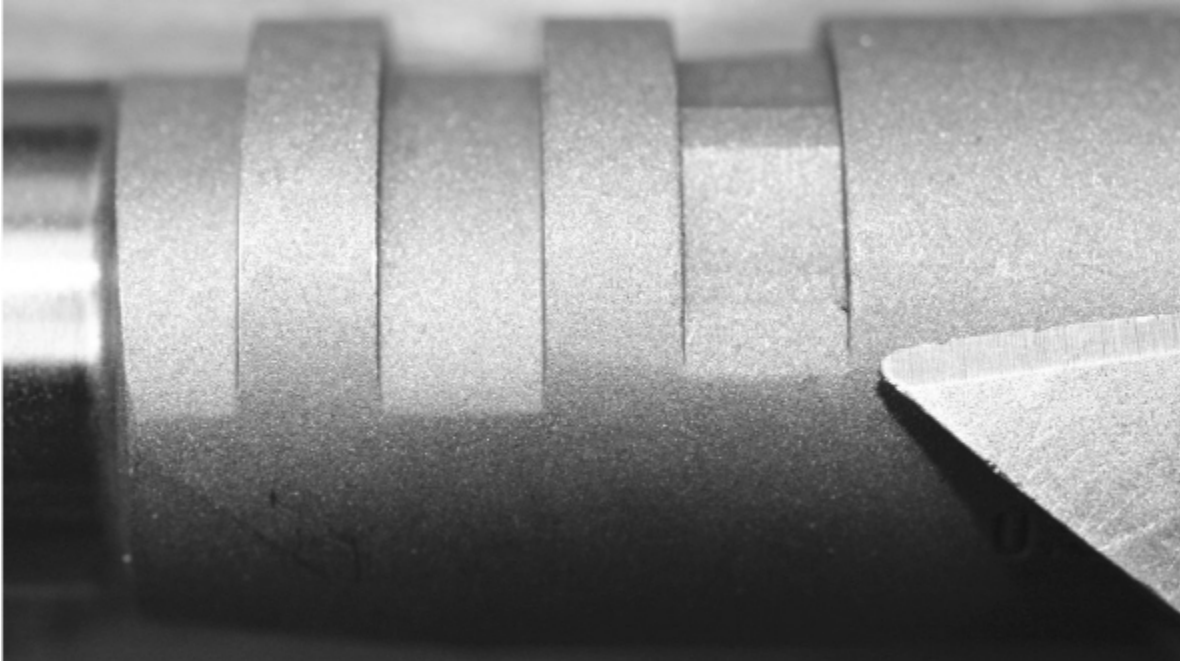
Gunsmiths used to spend a whole lot more effort on bushings, until word got around about how Colt solved the 9mm/Super problem. The lower barrel is a Super, with a visible muzzle flare. The upper is a .45, and while the increased diameter isn't readily visible, it is there.



The Kart EZ Fit barrels have raised fitting pads in the rear slot.

The big deal about the collet-bushing barrels was that the enlarged lump made a perfect base to tightly-fit a regular bushing for reliable function. More on bushings in a bit.

At the rear of the barrel shaft is the chamber. The top of the chamber has the locking lugs. You'll see two slots and three lugs. An ideal fit would have all three lugs bearing evenly on all three corresponding lugs in the slide. If you ever find a 1911 with a barrel that has all three lugs evenly fitting, you're holding the work of a master. Many earlier guns left the factory with only one lug bearing. In the course of firing, the one lug bearing would set back slightly under the load of recoil until the second lug started taking the load, and then the setback would stop. (I imagine that a lot of the initial setback happened when the proof loads were fired.) Commander and smaller guns will have only two bearing lugs. The slide needs the extra space the front lug took up, just to cycle far enough to function.



Many custom barrels use a “lifted” rear slot as a means of fitting barrels. Your gunsmith will file here to fit its upward travel.

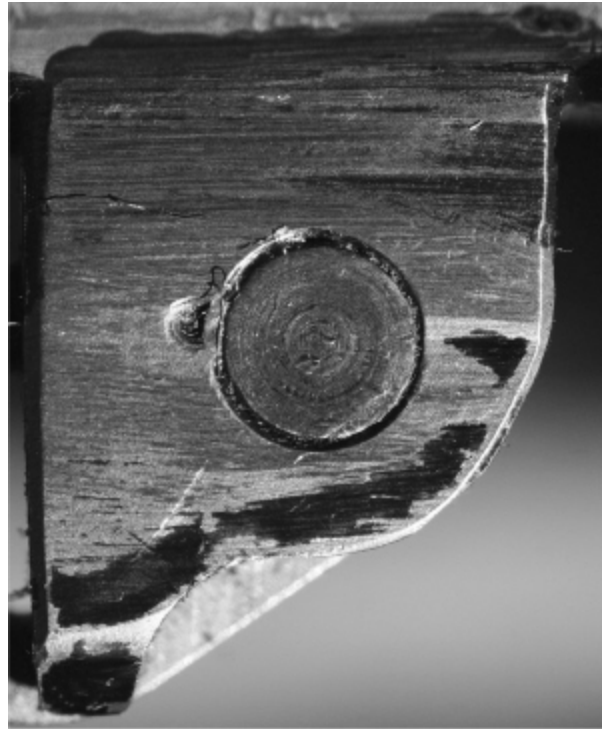
If you look closely at a good barrel, you’ll see that the two slots on the barrel are not the same. On a barrel such as a Bar-sto, the rear slot is higher than the front one. In a barrel such as a Kart, the rear slot will have two raised pads in it, at roughly ten and two o’clock. The raised inner portion of the slot is meant as an upper stop limiter. On the Bar-sto, the outside shoulders of the raised slot bear against the rib of the slide, stopping the barrels upward movement. The raised pads of the Kart do the same thing. The bearing portions can (and must) be filed, to adjust upward movement of the barrel, so it has sufficient engagement with the locking lugs of the slide, and presents the primer to the firing pin. Barrels lacking some sort of stop depend on the upward limit of the link to keep them in place. While that works, it can be hard on the link, and is not as good a long-term solution. And many 1911 owners expect “long term” to be quite a few rounds.

Occasionally, you have a chance to handle an old-school gunsmithed 1911. Look inside the slide opposite the ejection port. On some guns you’ll see a small dab of weld. In the old days, before match barrels were common, gunsmiths would weld the barrel to re-cut it for a tight fit. To stop the upward travel of the barrel, they’d (the good ones, anyway) weld a spot

on the inside of the slide, and file it to act as an upward stop to barrel travel. Yes, it was only one spot, and off-center at that. But it was a stop.

You'll usually find a marking of some kind on the chamber area, usually caliber, and sometimes the maker's name. A good maker will mark it, then finish-ream the chamber. That way if there is any upset into the chamber, the reaming cleans it up. Barrels that are marked by milling or laser-etching do not risk altering the chamber by marking.

In back is the hood. Why a hood? I can only imagine, as the hood makes fabricating barrels and slides more difficult. I'll bet John Moses Browning first tried to make the earliest pistols without hoods. But what he found was that the cartridge just couldn't be relied on to feed 100 percent without some kind of guide. The hood is a guide. As a bonus, it offers a longer base to lock the barrel to the slide, and a longer base potentially adds accuracy. The hood can be a tight fit or a loose one. Theoretically, a tightly fitted hood increases accuracy. As a practical matter, it increases accuracy only after all the other variables have been "nailed down." That is, if we took a good barrel and simply "grew" the hood until we could fit it tightly to the barrel, we would not see much increase in accuracy. But if we have a barrel that is tightly and properly fitted except for the hood, and then tighten the hood, we can expect to see groups shrink a bit.



The lower lug had a number of jobs to do, and properly-fitted will last a long time. Improperly fitted, and it will quickly wear or even break.

On the bottom are the parts that cause so much consternation; the bottom lugs and the link.

The bottom lugs and the link have separate jobs. The link unlocks the barrel, and the lugs lock the barrel. Do not confuse the two jobs. The bottom lugs ideally rest on the slide stop shaft, and prevent up-and-down movement of the barrel when it is in battery. As the slide travels forward, chambering a round, the barrel moves forward until the bottom lugs contact the slide stop pin. The barrel can't ride up on the pin until the slide has move forward enough to clear the locking lugs. Until then, the top of the barrel and the slide rub. Once the lugs have clearance, the barrel cams up the bottom lugs until the rear foot of the lugs contacts the slide stop pin, and the assembly stops. At the stop point, in a properly fitted 1911, the pivot pin of the link is "over center" by a thousandth of an inch. That is, the center of the link pivot pin is forward of the center of the slide stop pin. When fired, the barrel must travel that thousandth before it can start unlocking. The initial thrust of recoil thus is working against the mass of slide and barrel, and the full force of the recoil spring.



The lower lugs on this barrel have had the radius “clipped” to quicken unlocking. Bad show, and a short-lived barrel.

When the barrel unlocks, the unlocking happens as a result of the link pin pulling the barrel down out of the slide. Once released, the inertia of the slide carries it to the limit of its rearward travel. The barrel takes a different path. Pivoting around the link pin, the barrel, by means of the lower lugs, hits the frame and stops. This is important; the lower lugs hit the frame and stop. You do not want the chamber portion of the barrel to be the impact surface. Barrel fit in relation to the frame is critical. If the surface is in the wrong location (the frame, that is) the barrel and slide can be worked a lot harder than designed and even wear prematurely or break.

The rear of the lower lugs must also strike the frame evenly. If they do not, the stress of impact can peen or break the lower lugs.

If the frame face is too far forward, the slide must cam the barrel down while the barrel is wedged against the frame. Lacking room, the slide and barrel upper lugs must grind past each other, rounding their corners and prematurely wearing them. Usually you see rounded lug shoulders and a loss of accuracy. And short order for a 1911 is less than 10,000 rounds. I’ve seen very badly fitted barrels quit in a thousand rounds. If the frame face is

too far back (towards the shooter) the lower lugs can't contact the frame face before the chamber crashes down on the frame seat. Depending on how strong the barrel is, and how stout the loads the barrel may last a long time before breaking. There will be no warning of impending failure. The lower lugs separate from the chamber area, and accuracy suddenly goes all to hell, then if you keep trying the pistol stops working. Sometimes the link quits first, cracking and often unable to unlock as designed. Again, the pistol stops working.

A mis-located frame face is serious but rare. It eventually damages the barrel and slide. If yours is egregiously mis-located, the only solution is to have the frame machined for an integral-ramp barrel.

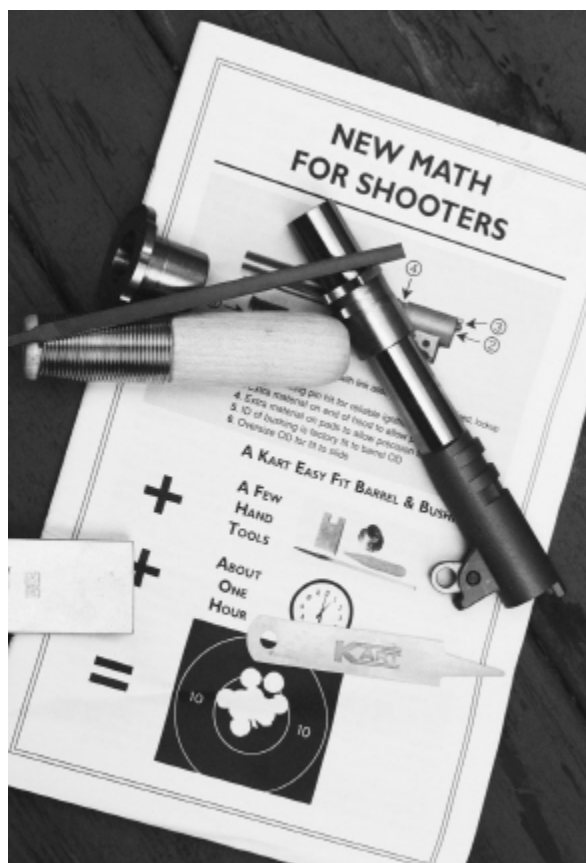
Barrel Fit Checks

It isn't uncommon to see someone checking a 1911, and pressing the chamber down with his thumb when the slide is closed. We all do it. However, it doesn't impart as much knowledge as you might think. First, what does a moving barrel tell you? That the barrel is propped up by inertia, being thrown vertically as the slide closes. There is nothing mechanical holding it in place. In some instances, the barrel will spring back in place after being pushed. There, the barrel is binding on the bushing in its locked location, and when you press down, the bushing is springing it back. Neither condition tells you much other than the barrel is not mechanically supported. You see, the primary requirement of accuracy is consistency. If your barrel (taking still as an example the barrel that will push down) consistently slings up to the same locked position every time, then it will reasonably accurate despite being loose. Now, the one that springs back is putting a lot of stress on the bushing, which may wear faster. Or break. Or not be affected at all. I've seen guns that had been working for decades with bushing bind to lock them up consistently that were still going strong.

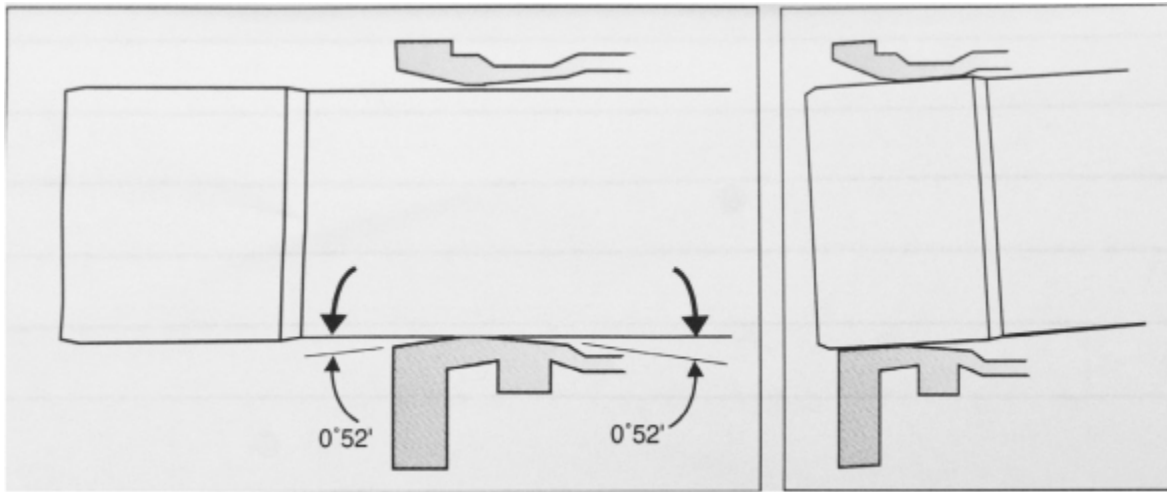
What then, should you check, to see if the barrel is properly fitted? Without a bench full of tools, there are only a few things you can do. First, check the barrel spring. Yes, it doesn't tell us much, but it does tell us something. Also, if the 1911 you are looking at is purported to be a "super-custom tactical model built by a retired SpecOps Operator who can't use his

real name” (Honest to god, I had someone tell me that about a 1911 I was looking at) and the barrel springs, you should be suspicious. If it was supposedly built as a hi-end IPSC, PPC or Bullseye gun, and it springs, be really suspicious.

Then look at the bushing. (Of course, make double sure it is unloaded before you go looking at the noisy end.) Try to move the bushing. If you can make it move by hand, it is too loose for a modern gun. A military gun of WWII vintage might move, but nothing built since Jimmy Carter was packing to leave the White House should have a bushing that moves. Then place your thumb against and inside the muzzle, and try to move the barrel inside the bushing. If the barrel moves in all these places, you can be sure that it either hasn't been fitted other than installed and made sure to work. Or, it has been “fitted” by someone who hadn't a clue. A “fitted” barrel that is loose can be restored to tightness only by welding. Or a new barrel. Both are expensive.



The Kart EZ-Fit barrel is a way to get a first-rate barrel installed, and learn in the process.



Bushings are a lot more complicated than they appear. Here you see the intricate machining that goes into a well-made bushing. (Drawing courtesy Kart Precision.)

Bushing Fit

The bushing locates the front of the barrel. While it is theoretically possible to achieve across-the-room accuracy in a 1911 without a bushing (not that it would feed well, if at all) we really need more than just that. The bushing presents a gunsmith with a problem: When locked up, it is a circular hole containing a circular object, the barrel. But when it unlocks, the barrel tilts down at the rear, becoming an oval object. The old method was to carefully contour the inside of the bushing so it could accommodate the barrel unlocked. The easier solution, and also more durable (no metal removed for clearance) is to relieve the barrel for unlocked clearance.

The bushing must be a tight fit to the slide, and to the barrel, or it isn't much use. But you can take things too far. A bushing can be moved with the fingers and still offer more than 90 percent of the potential accuracy boost it can offer. What matters most in accuracy is radial displacement, and what matters most in durability is lateral displacement. A radial displacement is the side-to-side movement of the barrel. From the locking lugs to the bushing a barrel is three and a half inches long. (Government, the

Commander and smaller guns it is even shorter.) If we have a radial error of .001", that translates to just over half an inch at 50 yards. So, if we have a 1911 with a couple of thousandths of slop in the bushing, and that much in the rear lockup, we've added a potential 2 inches of error at 50 yards.

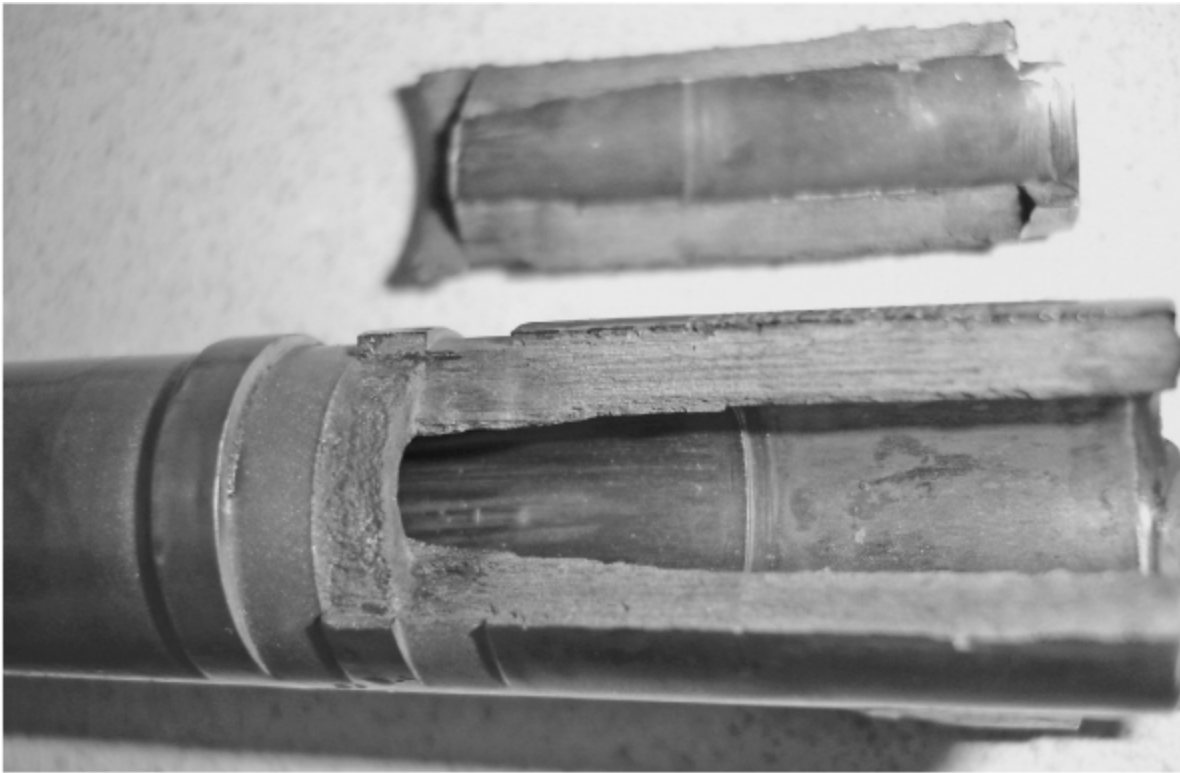
Lateral displacement is the front-to-back movement of the bushing in the slide. While it is possible that such movement would have no effect on accuracy (remember our .001" error?) the real problem is wear. A bushing moving back and forth is going to quickly have the bushing-locking lug hammered by the repeated impacts. It may break. Even if it doesn't, the peening lug can change accuracy and zero from its own gradual movement and settling.

In the old days, bushings were carefully relieved, sculpted, ovaled and shaped so the barrel could move and yet be supported when locked. Now, it is much easier. Well easier theoretically. The theory is thus: if the interior of the bushing bearing surface is a saddle-shaped radially symmetric cylinder (think the hole of a donut hole) then it will bear on the barrel on its smallest diameter. But the barrel will have room to move once the bushing has move back past the enlarged section at the muzzle. Remember the slightly larger diameter we talked about? On a lot of barrels it is barely discernable, only .010" Ten thousandths of an inch. The bushing can be the same diameter as that enlarge portion, but the curved nature of the bushing interior allows for barrel movement unlocking. In practice, barrel and bushing makers go to a lot of trouble to machine the bushing bearing surface precisely, accurately and with the potential for a long service life.

Barrel Fit, The Process

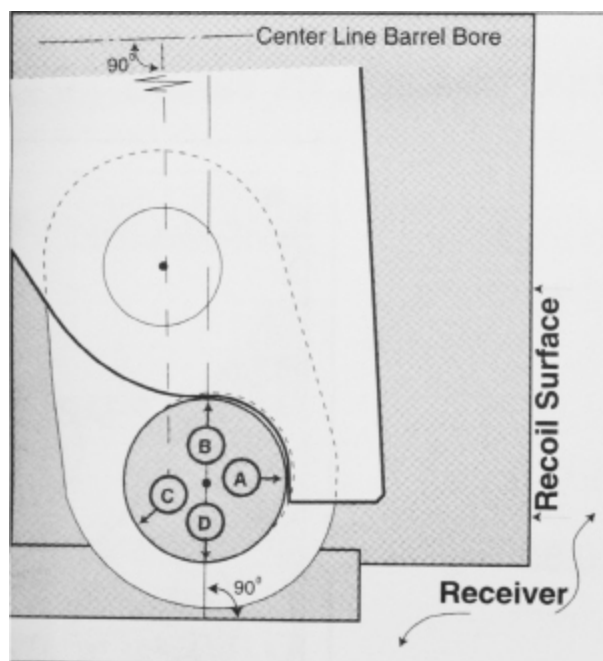
When your gunsmith fits a barrel, he goes through the same steps the manufacturer did, but with more of an eye to a precise fit. The manufacturer wants a precise end-result, but cannot spend the time (and employee dollars) it takes to have each and every one perfect. To do so would add \$100 to \$200 to the cost of the pistol. "So what?" you say? "I'm spending over a grand, what's another hundred bucks?" Apparently to a lot of people, it is a lot of money. And once a 1911 goes over the magical grand figure, the buyer expects a lot more than just a well-fitted barrel. What with CNC

machining, the manufacturers can come a lot closer than they did in the old days. Let's take one, simple example. Back before computers were involved, manufacturers could either make barrel hoods short enough so that the longest hood would fit the shortest slide, or not. If they did, every barrel would drop in place on assembly. Of course, accuracy would suffer. Not on all, but on many. The other choice is to select a percentage. You see, back then not all hoods could be counted on being the exact same length. The lengths would wander, as tooling wore, as lathe operators got tired, as new employees became more experienced, whenever someone got P.O'd at the supervisor, even the temperature of the shop and phase of the moon had an effect. So the maker would pick a percentage. "Ten percent of our barrels will be too long, and need fitting. And the assemblers would have to file every tenth barrel until it would fit. Of course, even that wasn't a guarantee of accuracy. If the assemblers were in a hurry, or working on a salary plus bonus for output, they'd hurry through the hood filing to make the damned thing fit as quickly as possible, and get on with assembly.



Some things no amount of proper fitting can forestall. Double-load your ammo and you too will have scrap to show for it.

And through it all, the quality of the bore was the make-or-break part of the equation. Remember my prize gun, from the Targetworld Nationals? The one I sent off to Steve Nastoff to make reliable and accurate? I had him weld and fit the barrel that was in it. Luckily I had just gotten my Ransom rest, and I tested it before shipping it. With the best ammo (185-grain jacketed semiwadcutter, factory Match) it would just barely keep five shots on a piece of typing paper at 50 yards. That's right, an eight-inch group at 50 yards. Steve peened the rails and fitted the slide. He welded the hood and bottom lugs. He installed the oversized bushing I sent, and fitted the barrel back to the now-tight slide and frame. He did a state-of-the-art job for the early 1980s. And when he was done it shot groups the same size as before it left. Yup, 8 inches. Not Steve's fault. The bore of that Colt barrel just wasn't up to doing any more than that. Perhaps it wasn't bored straight, or had warped in the heat-treatment. Perhaps the bore was over-, or undersized? Who knows.



At full lock the lower lug and link are locating a lot of surfaces in the right places. Well-done and accuracy is ensured, provided it is a good barrel to start with. (Drawing courtesy Kart Precision.)

I finally got tired of the casual accuracy, and installed a Bar-sto barrel. The Bar-sto was a lot of work to fit, as all the tolerances on the gun had been tightened up by Steve's careful fitting. But when I was done, that gun shot one-hole groups. One inch groups at twenty five yards, two at 50. Which brings me to a related subject, before we go fitting a barrel: how much accuracy do you need?



Busted barrels often take the slide and other parts with them. Sometimes you can't even salvage the frame. Careful reloaders are ever-vigilant.

Actually, the answer is a result of you asking yourself three questions: "How much accuracy do I need? How much accuracy can I use? How much accuracy am I willing to pay for?" Need is simple; you need all you can get. Like the rock n' roll motto "Some is good, More is better, Too Much is not enough" there is no such thing as too much accuracy. But ask yourself this; If you're in the job of kicking in doors, and in the event you do shoot people, they are at most across the room, how much do you really need? A

measure of accuracy used in rifles is MOA, minute of angle. (A circle has 360 degrees of angle. Each degree has 60 minutes of angle. One minute, at 100 yards, is just over an inch wide.) Thus a one-MOA rifle will shoot all shots inside an inch at 100, 2 inches at 200, etc. A handgun that shoots a 1-inch group at 25 yards (a very accurate handgun, by the way) is a 4 MOA firearm. My friend Bruce Gray has a description for handguns that are almost, but not quite, beyond the pale; “Minute of garage door.” Basically, you can count on hitting a person at a reasonable distance, if you pay attention. One example would be shooting someone (let’s be realistic here, the 1911 is not well-suited for much hunting uses) across a large living room, say, 30 feet. A handgun only as accurate as my original Targetworld gun can be counted on for mechanical accuracy of an inch and a half at that distance. Think about it. At that distance, using a large shirt button as an aiming point, you can count on the bullet striking that button. You have more than enough accuracy, if you just pay attention to the sights. Here’s an interesting bit of math: an object is said to “subtend” a particular angle if it blocks your view of that angle. An object 60 inches wide (60 minutes of angle) subtends a degree of field of view. A 30-inch object at 50 yards subtends the same amount as the 60-inch one does at 100, and so on.

You can figure it the other way, too. That 30-inch object at 50 yards subtends 60 inches at 100 yards. If your front sight is .120” wide, and you have long arms, it is approximately 30 inches from your eye. The front sight subtends an inch and a half at 30 feet. So, that “inaccurate” pistol shoots a group no wider than your view of the front sight. If the front sight is on the target, (and properly aligned with the rear) you get a hit.

So how much do you need? I’d say as a working start, accuracy good enough that the group is no wider than your front sight. Roughly 16 MOA. (which in a rifle would be best described as “This sucks!”)

The second question “how much can you use,” depends on your skill and the conditions. Bruce Gray, who has shot the Bianchi Cup (one of the few matches I have not shot) describes the needed accuracy as “Not less than an inch and a half at 50 yards.” If you are, like Bruce, a shooter capable of doing well at The Bianchi, you need that much accuracy. For most people, the gun will be much more accurate than they can hold. The only way to test is to have a Ransom rest. Shoot the gun in the rest until

you've established the baseline of its accuracy. That is, you shoot it enough to determine that given the right ammo (as an example) your 1911 will deliver 2-inch groups at 25 yards. Some will be smaller, other larger. But the average is 2 inches. Your particular gun could shoot three, or four. Establish the baseline. Then, shoot it from the bench, using sandbags, for group size. Shoot again standing. When you can shoot groups only half again as large from the sandbags, and only twice as large offhand, you need more accuracy. That is, if the gun shoots 2 inches, and you can do three from the bench, or four offhand (average, not just the best single group) you need more. Why do the USPSA and IPSC Grandmasters insist on an inch or two at 50 yards from their guns? Because they can shoot almost to that level. They exceed the "one and a half and two" standard.

Last, what does accuracy cost? First, money. You must get a top-quality barrel for your 1911, and then have it installed by someone who knows what he is doing. Then, you must feed it top-quality ammo. If your ammo consists of brass left behind by other shooters, handed to your brother-in-law who does his own casting in the winter, and who loads with whatever powder is in sale, you can't count on accuracy. What accuracy should not cost you is specialization. If you can get good accuracy only with a particular bullet, or ammunition, or load, then you have to ask if it is worth it. Without that ammo, bullet or load, you don't have accuracy. Luckily that isn't as much of a problem as it used to be. Now, you can get a top-quality barrel installed, and pretty much count on good accuracy with everything, even count on gilt-edged accuracy with some bullets, particularly the Hornady XTP. What accuracy must not cost you is reliability. The days of Bull's-eye competition, where an accurate gun that was cranky or unreliable was expected, are long gone. Everyone understands, even gunsmiths, that 1911s can be both reliable and accurate, and you need not choose one or the other.

So, on with fitting.

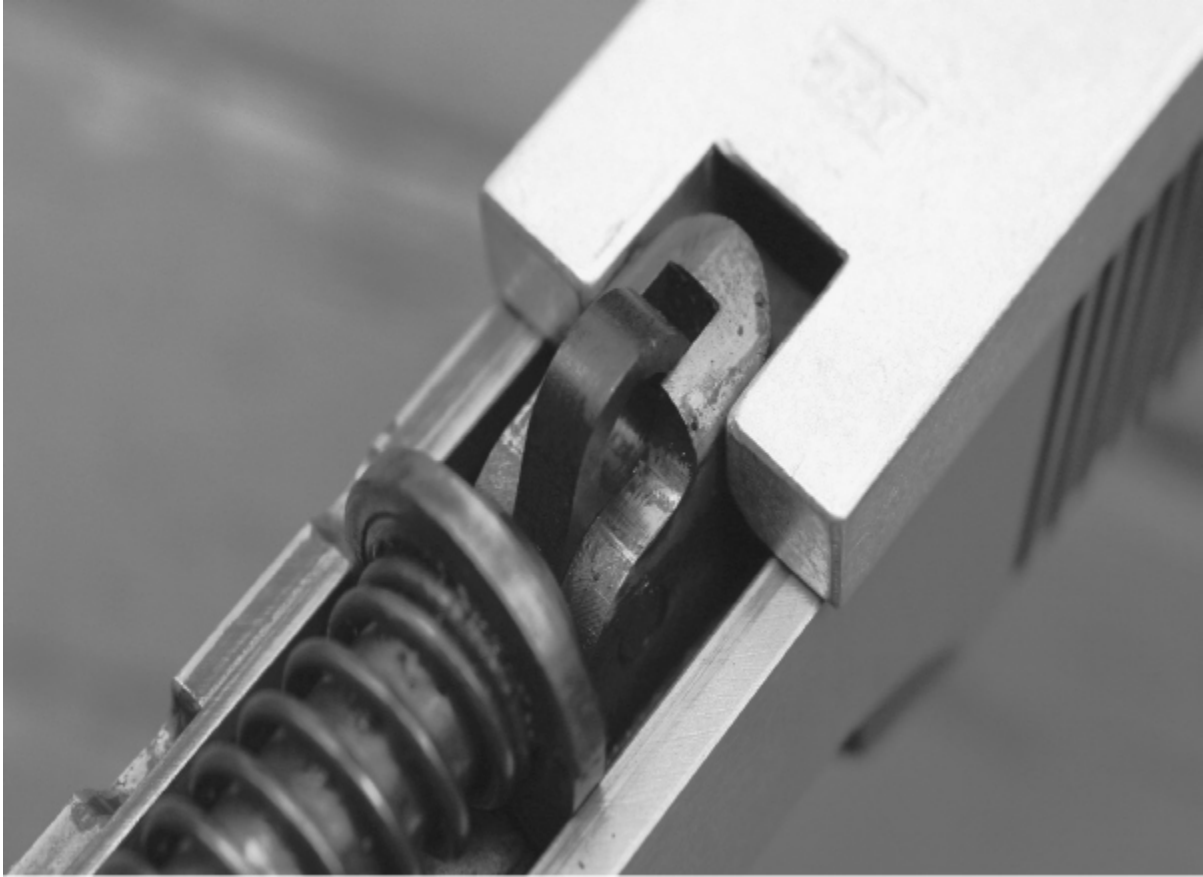
The first thing your gunsmith will do is measure everything. And check fit. Is the hood too long? Too wide? Does the bushing fit? Does the muzzle fit the bushing? Then he fits. There are a number of methods to fit barrels. The hood fit is broken into lathe, mill and hand. The top lug is file or weld.

The bottom lugs are mill, surface grinder or hand. The bushing is lathe or hand. The barrel to bushing is factory or lathe.

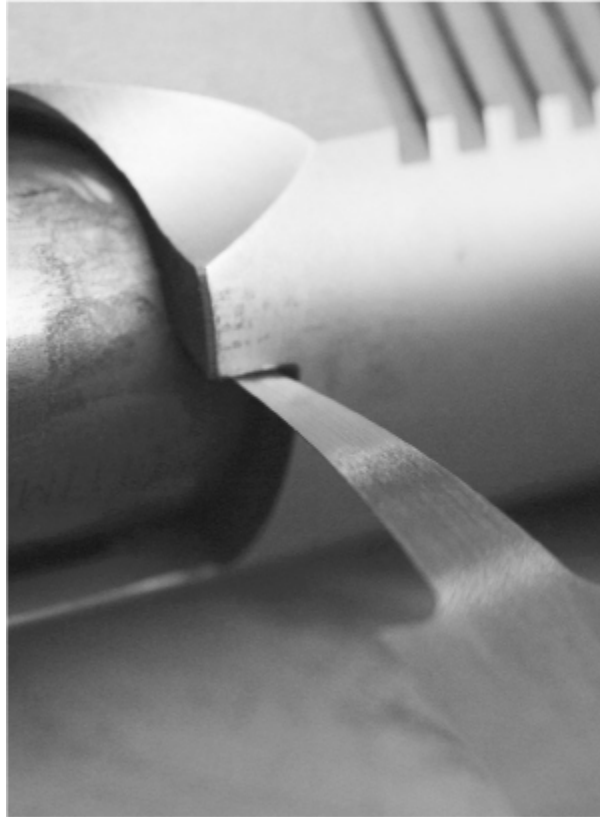
And through it all, the gunsmith knows what fits where.

Hood

The hood should be too long. The measure comes from using a gauge or modified dial calipers, and finding the distance from the breech-face to the first lug on the slide. Really particular gunsmiths will polish the breechface and square it to the barrel axis. With the distance known, he then decides on a shortening method. To fit it in a lathe, he (or she) locks the barrel in the lathe and shortens the hood until it is at or slightly over the known slide lug measurement. Then, he puts the barrel in the slide with a loose-fitting “fitting” bushing. The fitting bushing fits the slide snugly, but does not put any tension or stress on the barrel. He doesn’t want the hood fit influenced by the bushing fit. (If the barrel came with a pre-fitted bushing from the barrel maker, he’ll set that bushing aside until later. He’ll use a lug guide, to keep the bottom lugs square to the slide. And then slide the barrel back into the hood recess.



The Kart locating gauge here is used to demonstrate that the barrel lugs are upright. In fitting, you'd slide it from the other direction, but I didn't want to have to clean the grease off before handling the camera. (OK, I'm lazy.)



Here we see a hood fitted with the sides of the hood bearing. Properly done it works. But it is easier to have .003” clearance, which works as well and is easier to do.

What if it doesn't fit? What if the hood is too wide? Then he narrows the hood. He'll narrow the hood until it clears the slot, and has .003” or so clearance. He does not want the hood to touch the slot on the sides. To do so can cause it to sit unevenly, or be stressed, on the bottom lugs when he goes to fit them.

Using fitting marker he'll check the fit of the hood length. It should (when finally fitted) drop snugly into place without play, and without having to be forced. (A brief aside. Some gunsmiths fit the barrel so it requires a snug push to seat it home. They leave the hood tight as they finish fitting and test-fire the gun. The idea is that in test-firing, the barrel may be bearing on only one locking lug in the slide [Almost certainly so.] under the stress of firing, the lug may set back, and once it touches the second bearing lug, setback stops. And the barrel is perfectly fitted, without play. If it still is snug after test-firing, they'll clean up the last thousandth of

excess steel.) In the process he'll file the high spots of the hood. Hood fit matters lengthwise, not side-to-side.

The mill fitting uses a mill and the Jack Weigand fixture, instead of a lathe, to shorten the hood length. The advantage to the mill is that the gunsmith can also adjust the hood sides, square to the hood rear surface, and by known amounts. Without years of practice, it is difficult to narrow a hood by hand, keep it square, and only take off "enough" and not too much.

Doing the whole job by hand is possible. I've done it, almost every gunsmith has done it. It isn't easy, and as soon as power tools are available, any gunsmith with any sense uses them.

Checking Hood Fit On Your 1911

Use a marking compound. Lipstick, marking grease or grease with carbon black in it all work fine. Mark your hood. Slide the barrel into place as the gunsmith would, and then pull the barrel out. Is the grease disturbed on more than half its surface? Good, nice fitting. A perfect fit would be all across the rear of the hood.

Now clean the grease off and reassemble your 1911. When it is closed, try to fit a feeler gauge into the side gaps. Can't fit anything? Your barrel may be binding. If it shoots accurately, but the hood bears, you probably should leave it alone. But if you find your hood bears, and you have occasional fliers, careful work filing clearance can rein in those fliers. What's probably happening is that occasionally the slide closes and the hood binds against the hood slot, causing an uneven bottom lug lockup. The bottom lug is bearing more on one foot than the other. When you fire, the barrel shifts, (or doesn't when it should) and the shot goes out of the group.

Uplift, Or Slide Fitting

Once the hood is fitted, then comes uplift. The barrel must bear on the locking lugs of the slide with enough surface area, or the steel won't take the stress. If there isn't enough bearing surface, the lugs will peen, setback or shear their corners. You'll end up needing both a new barrel and a slide. The uplift is handled one of two ways: by adjusting the built-in uplift the

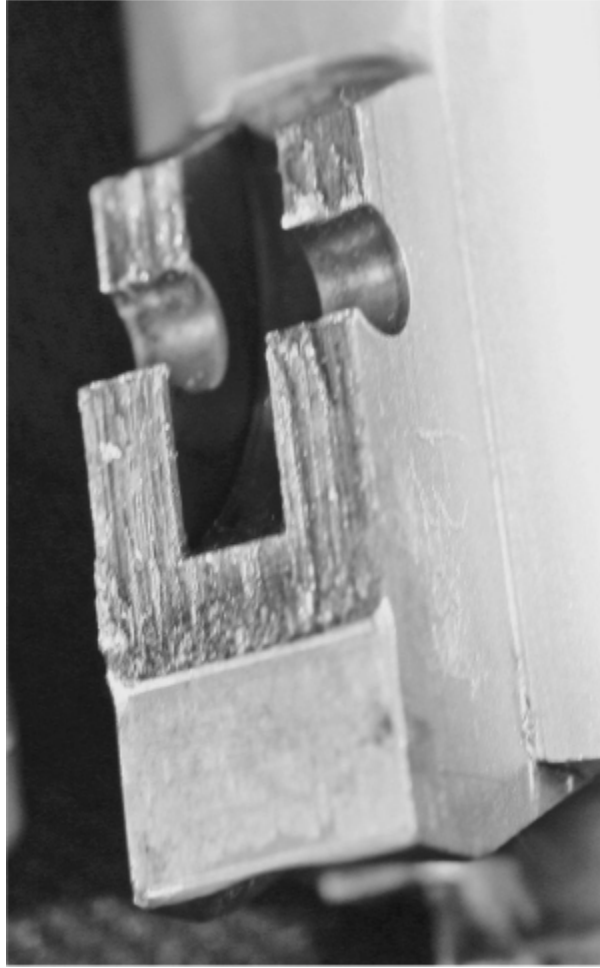
barrel maker put on his barrel, or welding in a stop for barrels that lack built-in uplift. Where's the uplift stop? On the Kart EZ-Fit barrels, it is those two little pads you see in the rear locking slot. On all custom barrels, the rear slot is machined a bit higher than the other slots. The outside ends of the arc of the slot thus are higher on the barrel chamber body. If you closely inspect your barrel, (I'm assuming you're holding a Bar-sto, Kart or other top-quality brand barrel in your hands) you'll notice that the end line of the rear slot seems a bit higher on the chamber side than the forward slot or slots. They stop the upward movement of the barrel. How much is enough? Ideally you want the locking slots to have complete overlap. That is, all the locking lug surface you can get, bearing between the barrel and the slide.



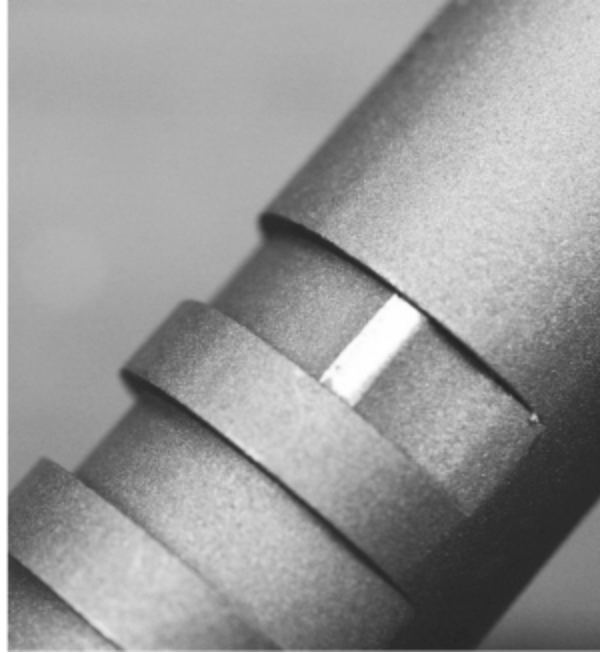
The link cams down, but the lower lug cams up. Below the 1911 barrel we see the Browning Hi Power barrel, which has no link. The lower lug cams up and down.



The Kart EZ Fit kit is worth it just for the fitting file and bushing. Here the file is cutting the fitting pad in the rear lug.



Shallow locking lug engagement can lead to early unlock, which can contribute to shorn lower lugs.



The fitting pad, filed to upper lock.

Your gunsmith will fit the barrel by first checking engagement, and seeing how hard the barrel hits on each of the shoulders. If the barrel lifts up high enough at the start (a sign the slide was machined too high, but still works) then his work is done. Otherwise he'll mark the slot ends, tap the barrel into place, remove and carefully file the shoulders to lift the barrel, using the same bottom lug guide as his alignment gauge. If he files too much from one side the barrel will tip, and the gauge will indicate he has to even things up. As he goes, he'll also check firing pin alignment with an empty case. With the firing pin and spring out, and an empty case in the chamber, he can eyeball alignment. If the firing pin is centered on the case, he'll have a circular hole in sight. If the firing pin isn't lined up, once the barrel is properly lifted, then there may be more work to do. A slightly off-center firing pin hit isn't a big deal. But off-center enough and it can cause reliability problems. Modern guns so rarely have this problem that some gunsmiths haven't had to deal with it. But if you ever have to work on "frankenguns" (home-assembled parts kits) or really old samples of hurried work, you know about the problem. The late Jim Clark, Sr. ran into it often enough that he made special off-center firing pin bushings to rebuild slides and get the firing pin strike on-center.

Checking Your Engagement

You can use the marking grease, or tiny bits of modeling clay. Mark the lugs (or place the clay in the lugs) and slide the barrel in place as if you were checking hood fit. Once the barrel is in place, rap the lower lugs with a plastic or rawhide mallet. Hit them so you are forcing the barrel up into the slide and away from the breechface. Remove the barrel and inspect the lugs. If you have shallow engagement, you'll see. The barrel lug height should be on the order of .060" If your barrel does not have more than .040" of engagement, see that it gets repaired. .040" is the least I'd go with, and even then only for light-duty guns. Were I building an ESP gun for IDPA, shooting 9mm or .38 Super at Minor loads, I wouldn't worry about .040. If everything else worked out perfectly, the gun was a tack-driver and reliable, and the barrel fit smooth, even and correctly timed, I'd leave the top lugs alone.

But were I shooting .45 at Major, I'd want more. And building a .38 Super for USPSA/IPSC competition, shooting Major, I'd want every bit of engagement I could manage, and not settle for less than .050". During the time I was working on this chapter I happened to be talking to Irv Stone III of Bar-sto on a regular basis. In one phone call I asked him "What would be the absolute minimum lug engagement you'd settle for?" His reply, after much hemming and hawing, was "forty thousandths. But I'd want more." Which were almost the identical words his uncle, Tom Stone, told me while teaching me to fit barrels twenty years ago. "But for anything other than a minor caliber, I'd want 50 for sure."

What to do if your lugs are "shallow?" The only thing to do is lift the barrel. If the barrel has fitting pads, or a raised slot, you can lift it. You will, however, be creating a gap between the bottom lugs and the slide stop pin. The long way to raise the barrel is to lower the slide. By lowering the slide, you close the gap between lower lugs and slide stop pin, a gap created by lifting the barrel. An already-built 1911 suffering from insufficient upper lug engagement is a delicate thing to deal with. And perhaps best left to the Pros.

Welding stop is done to barrels lacking any kind of a lift-stop pad. When re-fitting welded-up barrels in the old days, we'd put a tab of weld on

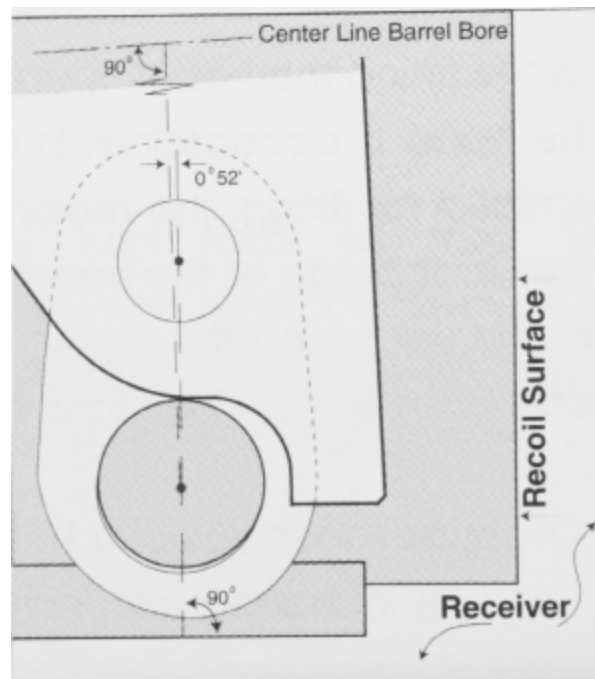
the slide to act as a stop. Otherwise, there was nothing to stop over-lifting the barrel up into the slide until the barrel locking slots were bottomed out. As some of those barrels were made with slots too deep, you'd end up with a barrel too high, and a real problem. the weld, filed to stop the barrel, kept from over-lifting. However, with all good barrels made with lift-stops in them, there isn't a need for welding. And since few, if any, gunsmiths weld old barrels anymore, you'll see the weld only on older guns.



Jess' busted and welded lower lug barrel. The experiment was a success, but the patient didn't survive.



The hand-turned lug cutter can do an excellent job. Power is better, but not a necessity.



In feeding and locking, the barrel rides up the ramp of the lower lug. The link does not lift it.

What happens if you lack engagement? Basically, you wreck the barrel, and then the slide. Or the slide, and then the barrel. If you catch it in time

you can get by replacing one of them (the busted one) But if you don't, you're into it for a new top end. The insufficient engagement greatly increases the load on the lugs, and you end up setting back the lug, rounding the corners, or chipping the corners. At some time in the process, accuracy goes all to hell. Jess Hernandez's gun is a perfect example of that, with its insufficient lug engagement (less than .025" as near as I can tell after the fact) and subsequent loss of accuracy. On Jess' gun, did the low lug engagement end up creating the broken bottom lug, or did the "repaired" bottom lug set up the insufficient upper lug engagement? There's no way of telling. But the barrel, slide and work that went into them, is toast.



The cutter tools of the hand-turned lug cutter come in “close” and “almost” sizes. But you can’t cut it exactly, and some hand-fitting is needed.

Lower Lug Fitting

There are several ways to cut lower lugs, but they all require machines or special tools. You can't just fit a lower lug with a chainsaw file, and expect to have anything you can show off to your friends. The problem with fitting a lower lug, is that unlike the rest of the barrel, it does more than one thing. The hood simply locks in place. The bushing supports the muzzle. But the lower lug locks the barrel up, it cams it down, it holds it in place for feeding, and it keeps the barrel from shooting out the front of the slide. You cut the lug to fit after you have fitted the hood and locking lugs, and before you fuss with the bushing. Cutting the lower lugs requires either the Jack

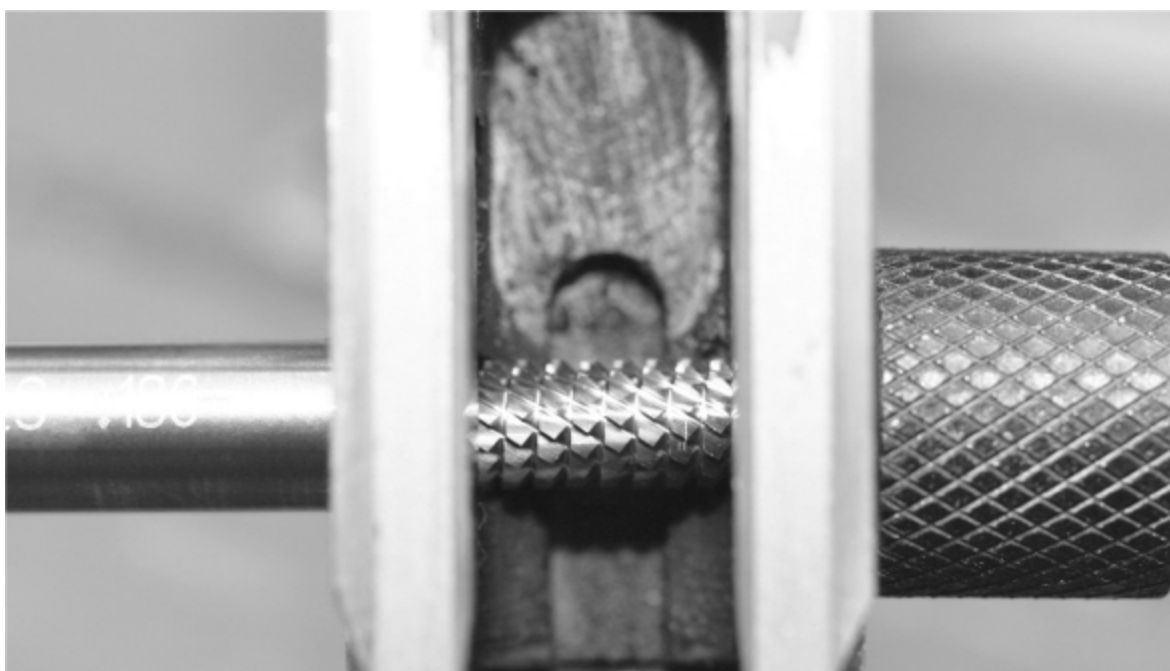
Weigand barrel fixture, a surface grinder, or a hand-powered lower lug cutter.

The Weigand fixture is a tad complicated, but easy once you get the hang of it. Simply put, the fixture holds the barrel in place while you use a .200" diameter (or close to it) end mill to cut the lower lug locking surface. You move the mill table (holding the fixture and barrel) into the cutter by increments of .005" until you can press the barrel into locking when you reassemble your 1911. (The process is a bit more involved, and the instructions that come with the fixture are quite detailed.) Once there, you finish by hand-fitting, install the link and file the clearance arcs and faces. The drawback to this method, if there is one, is the need for power equipment. If you have a mill, getting the fixture is inexpensive, and lets you do a lot of barrels quickly and easily. If you do not have a mill, the cost of one will pay for a lot of barrel fitting by someone who has one.

Surface grinder? If you think mills are expensive, surface grinders (at least good ones) are more so. I watched Irv Stone III of Bar-sto use a surface grinder to fit a barrel once. He had a grinding wheel shaped to the contour of the lower lug and its bearing surface. He locked the barrel lugs up and bore level in a special fixture he'd made, and ground the lugs in several passes. He then pulled the barrel out, checked the fit, put it back and gave it some more passes. Once the slide was at the "almost closing" stage he knew to dress "X" amount off of the lugs. It didn't take him much more time than it took you to read this paragraph and visualize the process. Once there it was simply a matter of timing the lug, fitting the link, and checking fit. If you have a surface grinder and a lot of barrels to fit, this is beyond slick.

The hand fixture is simple: a cutting head replaces the slide stop pin in the frame. There is a cutting handle outside of it. You assemble the pistol without the recoil spring, and with the cutting tool through the slide stop hole. Then you press the slide forward while turning the handle, cutting the lower lugs to shape. You get the tool from (where else?) Brownells. The advantage of the tool is that in the scheme of things it doesn't cost that much. Certainly nowhere near as much as a mill or surface grinder. It does an excellent job of prepping the lower lugs. You will, however have to finish the lug fit with hand files, as the lug cutter is not able to cut the lower

lugs right up to the finish dimension. Not without also cutting the slide stop holes in the frame. With power tools you can cut or grind the lower lug foot surface right to the location where it locks the barrel properly between slide stop pin and slide. With the hand tool you have to finish the last few thousandths by hand. And that is where you can run into problems. The two lower lug feet must bear evenly and equally on the slide stop pin. If they do not you will either have a binding barrel, subject to occasional fliers, or you will have uneven bearing and wear, and accuracy will deteriorate faster than it should.

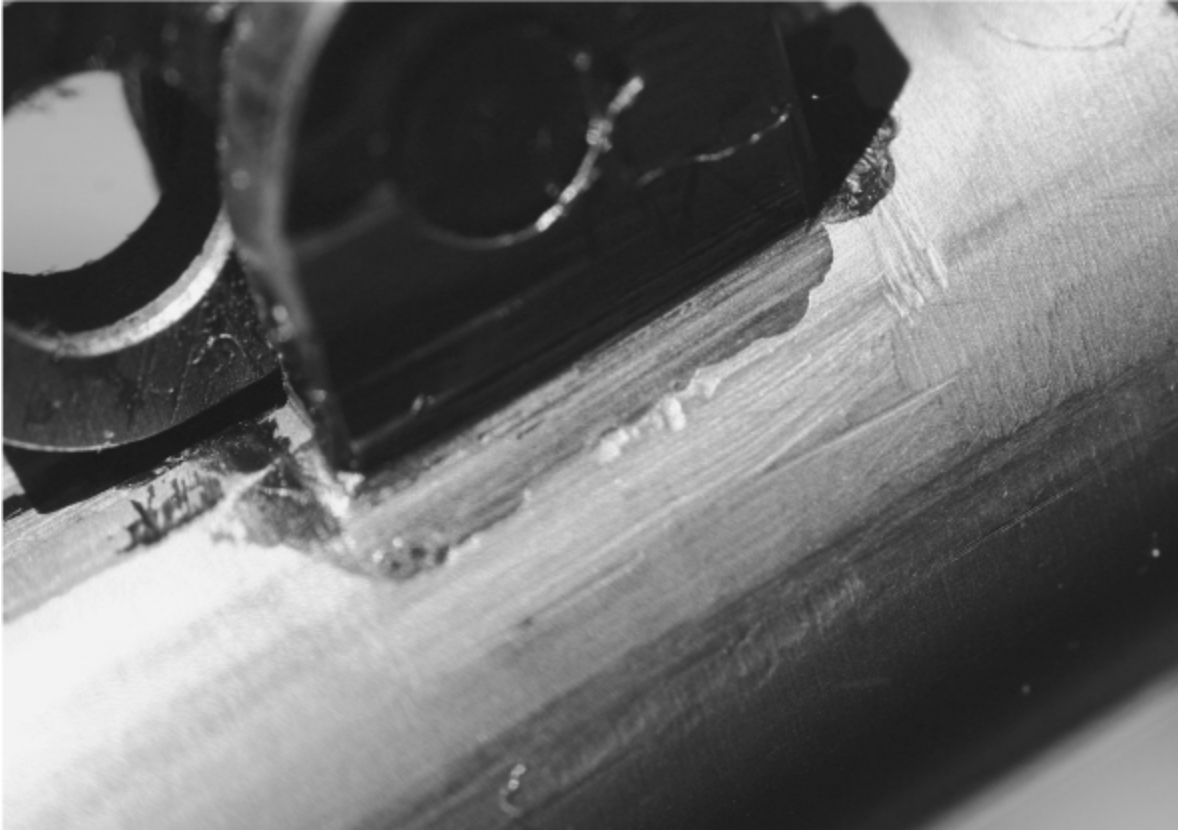


With barrel and slide removed for sight, you see how the cutter fits.

Checking Lower Lug Fit

The first thing you do is take a good look at the slide stop pin and the lower lugs. Is the finish on the pin evenly worn? If one side (where one foot bears) shows a large bright patch and the other simply a bright line the barrel is tipping as it locks up. One foot is taking the brunt of the stress. The lug feet will also tell you a lot. If the gun has been shot some, the lug feet will be burnished from the stress load. Is the burnishing even on both feet? Again, if not, one is taking more than the other. Rather than use fitting

grease or lipstick, coat the slide stop pin with Dykem. Without a recoil spring in it, reassemble and work the action half a dozen times. Take it apart and look at the dykem and see where the lugs have worn it off. Uneven bearing is not something you can fix yourself. Usually, it is either a “leave it alone” or an “install a new barrel” proposition. The only two ways you can get both feet in contact is to lower the barrel (decreasing lug engagement, which we never want to do if we can avoid doing it) or to weld and re-fit the lower lugs. Pumping heat into an already heat-treated barrel (or any part) is not something to do lightly. The problem is answered by asking (and answering) a few simple questions: Is it accurate enough for your purposes? Is it reliable? Is the accuracy improvement you’re likely to get worth the money spent? If the answers are “yes” and “yes” then the last question had better be answered by “a whole lot of accuracy.” On the other hand, if you’ve sent the gun and a big check off for a proper barrel fitting, and it comes back not evenly and completely bearing on both lugs, then you need to have a few words with your gunsmith. A factory gun, that’s a different matter. The whole reason a lot of 1911s have left various factories over the decades with uneven bottom lug bearing is that they can still be accurate, reliable, and long-lived with partial bearing. In an ideal world they’d be perfect. In an ideal world you wouldn’t have to spend over \$1,000 for a good 1911, and Mary Jo Kopechne would be alive.



Bar-sto carefully heat-treated this barrel. Then someone went and welded on it, after mis-fitting it. The results were not pretty.

Links And Their Mythology

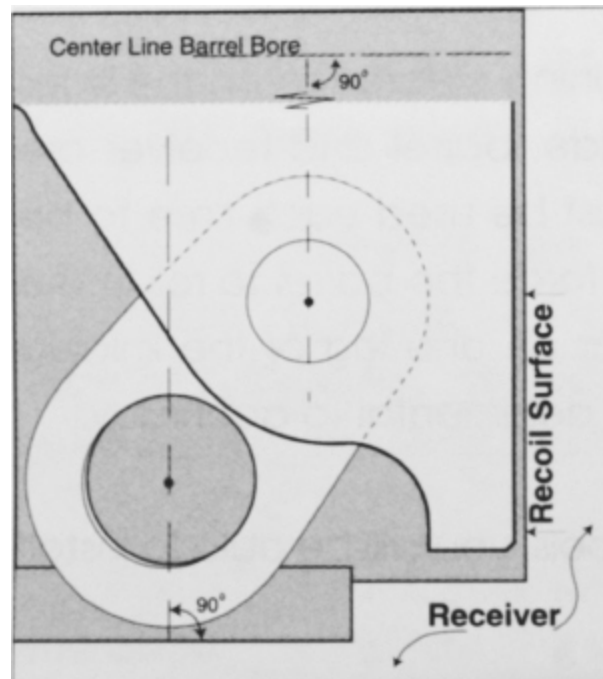
I had a customer come into the shop once and ask for a 1911 link. “Why?” I asked, out of curiosity, while mentally cataloging which ones I had on hand. “A standard one, mine’s worn out.” I have to confess that I did not conduct my side of the conversation in a dignified and suitably mercenary manner. My reply was something to the effect the “Links don’t wear out.” He turned and left, and I learned a valuable lesson that day: there are a lot of people who invest their 1911 barrel link with near-mystical powers. And don’t know what the link does.

Simply, the link pulls the barrel down out of locking engagement with the slide, and controls its crash into the frame. The link does not lock the barrel into the slide. It should not be used to prop up the barrel to “remove slack” or “tighten fit” or “compensate for wear.” The barrel locks up from the lower lug fit. It needs the link to unlock. If you use a longer link to prop

the barrel up for a tighter fit, you're putting a lot of stress on a small part that wasn't designed for it. That the link can put up with the stress is a testament to the genius of John Moses Browning, and not to the prudence of the person fitting the longer link.

"What's the harm?" someone will ask. "If I want to wear out a link faster by abusing it, and I get more accuracy as a result, what's the big deal?" Let's look at what the link is doing. As the slide cycles the link swings around the slide stop pin, taking the barrel with it. At the rear of its swing the lower lugs hit the frame face, stop the barrel, and it drops down to the top deck of the frame. There it rests in that little groove you've seen on your slide, waiting for the next round. If you have a link that is too long, here's what can happen:

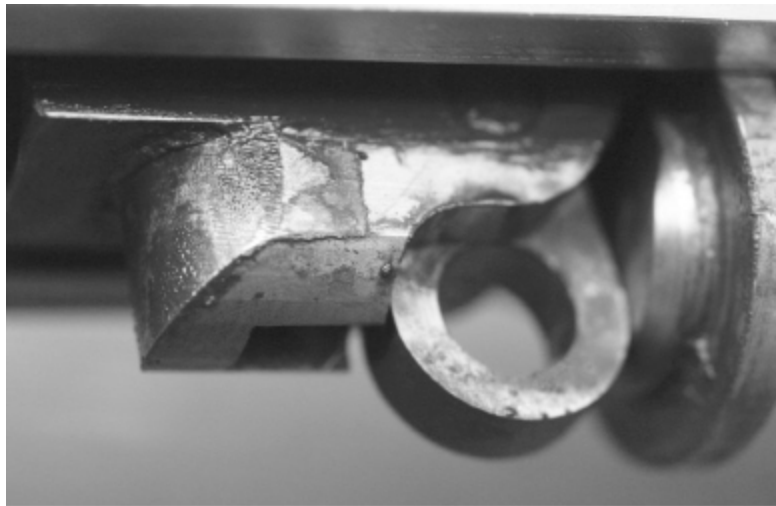
Instead of pivoting off the slide stop, the barrel pitches back for a small distance. The barrel and slide stay locked a bit longer. No problem, right? Wrong. When the barrel gets to the end of the slack in the link, it gets snatched off the slide lugs instead of cleanly pivoting off them. It also stays higher, rubbing on the slide, while it hits the frame face. In an extreme case, the longer link can prevent the barrel from settling down in its groove in the frame top deck, causing more friction against the slide.



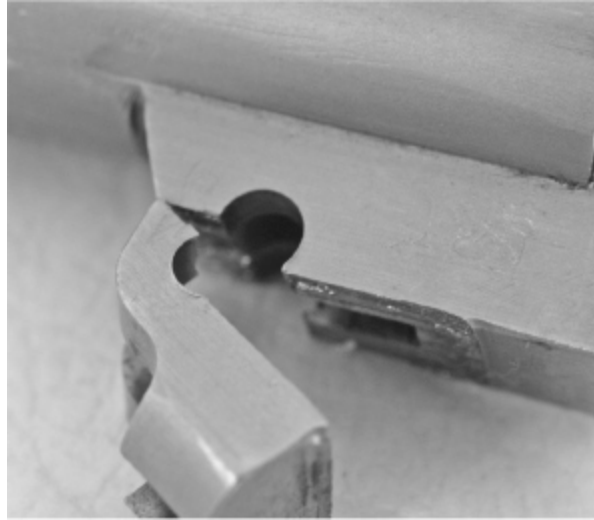
The link pulls the barrel down. Do not use it to prop the barrel up.

With a link long enough, the barrel hasn't room under the slide, and you have extreme problems: the slide-barrel friction becomes very high, and you can even have a barrel that can't unlock without harming the corners of the locking lugs. A long link can cause the barrel to ride too high in the frame groove, causing feeding problems as the cartridge noses have to negotiate the exposed sharp edge of the barrel feed ramp. And the friction of the slide to barrel works in both directions. As the slide moves forward, excess link length and friction can cause the slide to bind on the barrel as the barrel tries to lift too soon.

No a long link can be a real problem. Better you have a correctly-proportioned link and have a little bit of play when the slide is closed, than feeding, reliability and endurance problems because of the "solution" to your accuracy problem.



Ramps come in a few different styles. Be sure which yours is before ordering a new one.



Bad lug fitting can result in the impact breaking the lug off.

Gunsmiths have a selection of link lengths so they can fit the correct one once the barrel is properly fitted, not so they can use the longest one.

Ramps Or NoRamps?

The integral-ramped barrel is the hot thing for some 1911s. Some, not all. Before anyone gets to thinking that the ramped barrel (also known as “supported barrel”) is the newest thing, and invented just for IPSC shooters, guess again. Brownings first big-bore pistol, the Colt Model of 1900, had an integral-ramp barrel. That’s right, everything old is new again. He made the first gun ramped why? All I can figure is that back then, reliability was still an unknown thing for pistols. So to make sure he had a reliable pistol, Browning made it with a ramp. As he progressed in his understanding of the cycling dynamics of his pistols, and Colt gained experience making them, he went with a simpler design. However, for our needs, a ramped barrel can be good.

What the ramped barrel does for us, that didn’t matter back then, is give more support to the cartridge case. The ramp comes up to the chamber sooner and thus the sidewall of the case is supported by steel lower down on the case. If you happen to run your pressures over standard, your cases will last a bit longer. Does that mean all 1911s should have ramped barrels? No. The .45 really doesn’t need it. The standard operating pressure of the

.45 ACP maxes out at 17,000PSI. The +P loads go up to 21KPSI. Even if you take a standard load and double the pressure you are only up to what the 9mm, 40 and 10mm operate at. I've been present when two .45s had case blowouts. I was shooting a 10mm when it blew out. I've seen the results of a bunch of others. In all the guns in .45 save one, the damage was minimal or non-existent. Usually the biggest result is cracked grips and a trashed magazine. My 10mm didn't even do that. Once I found all the magazine parts and reassembled the mag, the gun continued to work normally. And has done so ever since. The guns that get trashed are the Supers running at Major. To make Major you have to exceed the standard .38 Super pressure ceiling of 34,000PSI. When you're running in the mid-forties, a sudden pressure spike can really make a mess of things. However, a supported/ramped barrel saves a lot of shooters and guns.

Ramps are not all the same. There are at least four different ramp patterns out there, although there are two common ones now. To fit a ramped barrel to a non-ramped frame you have to do a bit of delicate machining. For that you need a milling machine, fixtures, special cutters and experience. The two common ramps styles are not compatible. If you have a Para ordnance pistol, you can't drop a Wilson-ramped barrel in without a bunch of work, and vice-versa.

Do you need a ramped barrel? If you are shooting competitively, running a .40 in Limited, Limited 10, or Single Stack, I'd say yes. It would be prudent. Much .40 brass comes out of Glocks, and swollen and sized-down .40 brass is a known problem. If you are shooting an Open gun, I'd say you were an idiot not to have a ramped barrel. An Open gun is most-likely to be a .38 super or variant, run well past the 34KPSI ceiling, and there you most definitely need a ramped barrel.

But in a single stack .45, for Single Stack or Limited 10, for carry, for duty, a ramp is nice but not necessary.

Barrel Velocity

There are a lot of variables that effect velocity. Length is one of them, but not the only, nor even the biggest one. I had an opportunity with the selection of 1911s to test in several directions velocity and length. First, the

length of the barrel. I had on hand the Detonics with its 3-inch barrel. My lightweight Commander, which has served so well for so long. And a whole raft of five-inch government models. My first test was to chronograph a variety of ammunition in three different lengths, the Detonics, the LWC and a government model. As you can see, length does matter. However, as I mentioned, there are other factors that come into play. Bore diameter, the smoothness or not of the bore, height and width of the rifling all matter. Some barrels are faster than others. Back when building my first Open gun, I built a matched pair. One for me and one for my then-girlfriend. I used a pair of Bar-sto .38 Super barrels that came from the same production lot. One gun consistently delivered 50 feet per second more velocity with any load than the other barrel did. With that in mind, I choronographed a pair of loads in every five-inch 1911 I had my hands on. The velocity differences were interesting. Despite all being the same length, and chrono'd on the same day, they showed a spread of almost 50 feet per second.

If we assume that all barrels can show such a spread, it is entirely possible that if you have a government model with a particularly “slow” barrel, and a Commander with the fastest barrel ever made, they could deliver identical velocities. There is no way of knowing if a barrel is fast or slow until you chrono it, and do so at the same time as the ones you’re comparing it to. The differences, while measurable, are small enough that a day’s difference in weather can cloud (no pun intended) the results.



Barrel length matters, but not as much as people might think. A “fast” short barrel might deliver as much velocity as a “slow” long one.



My NEMRT Carbine qual course target, shot with my Caspian 1911. the course goes back to 75 yards.

Accuracy On Demand

Accuracy form the Ransom rest is one thing. Accuracy you can use is another. In the course of teaching in an LEO AR-15 class, the instructors have fired the qual course so many times we've gotten pretty used to it. The course is simple and straightforward, a test of marksmanship and some position shooting. At 25 yards, five individual shots, no time limit on each presentation. Then five shots in ten seconds. At 50 yards, five shots kneeling (start standing) in 15 seconds, then five shots prone (from standing) in 15 seconds. Finally, at 75 yards, 10 shots prone in twenty-five seconds. The target is a sheet of legal-size paper, with lines vertically dividing it into a central 4-inch bar and 2-inch sides. For the qual course, the whole sheet counts and the center is an X bar. For the Rifle FTX and match, the center is 10 points and the sides are five. Once you get a feel for the course, the difficult string is the 50-yard kneeling. Unless you are solid in your form, you'll throw a shot or two off the target.

Having done the course for a number of years, it is a rare occasion when the instructors can't shoot a 300 on demand, and most of the time we shoot 300-30X scores. Even with iron sights. (The instructors shoot the qual course for record, so there is no doubt we were there and can do what we're requiring of the students.)

The last couple of years the instructors have tried the course with handguns. Those of us trying it as more than a lark were trying to shoot a qualifying score, 270. Jeff Chudwin, Ned Christiansen and I have done it again and again. We've stood behind and coached each other on it. With binoculars you can see the bullet in flight, and call the shot exactly. Knowing where the misses went can be a big help in getting the group on-target. The problem we had was that much ball ammo, while plenty good enough out to 25 yards, gets really flaky at 50 and beyond. I've watched consecutive shots go two feet apart in the 75 yard string, with Jeff firing from a solid prone position.

I finally brought a supply of The Load. The Oregon Trail 200 grain lead semi wadcutter and Vihtavuori N-310 load that Bill Wilson uses to check accuracy. From my Caspian Race-Ready gun it shoots under an inch at 25 yards from the Ransom rest. After a few rocky runs (I suspect I was fighting off the flu that day. I was hot, I was cold, I was thirsty, I was drenched in sweat. I couldn't see the sights, I could see the bullets in flight. It was no fun.) I took a break and then posted three targets and marked every pre-existing hit on the target frames. I found what I had suspected: to get my group on-target at 75 yards I had to hold just over the top of the paper. With that bit of info, I then posted a single target and shot the course. Everything looked as it had before. The first time I counted my hits, I came up with twenty-eight. Then someone said "What about that middle group? You only counted one of them." So we counted them again and again. 30 hits. Holy cow. We went back to do it again and someone asked me "Are you going to try again?" My reply was simple "I know when to quit."

We had tried repeatedly to shoot a passing score, and we had all stalled at one time or another in the low to mid twenties for a score. Of the three of us, I'd have bet cash or dinner on Jeff doing it first. It was simply luck that I did it. However, we learned something very useful: while all ball ammo is the same inside of 25, and very similar from 25 to 50, past that it matters

what you use. And that plinking on the club's 100-yard gong is not the same as shooting a course against the clock, for score, with witnesses.

Chapter 3

Military Handguns Through The Ages

The British army under Victoria had one of the most rational policies for sidearms that you could think of. If you felt the need for one, buy it. (Officers only, of course.) If you couldn't use it properly, or didn't practice with it, it was your neck, old boy. And if you were unsafe, the Colonel would have a word with you. At the time the 1911 was adopted by the United States, many other armies issued sidearms. In many of those Armies, the sidearm was not viewed so much as a fighting tool as a badge of office. You were in charge, and just to make sure anyone wasn't clear about it, you were the only one issued a handgun.

Before The Great War, the whole question of a defensive sidearm was in flux. The old paradigm of single-action revolvers in a large caliber, loaded with black powder, obviously had to change. The new smokeless powder made ammunition loaded with black powder a hindrance. Contemporary accounts of the Spanish-American War noted the large clouds of smoke the 1st Volunteers' (The Rough Riders) Springfield rifles produced. The Spanish had Mausers and ammunition loaded with smokeless powder, much envied by the American troops. (So much so that when we finally got around to replacing the Krag with the Springfield '03, we lost the patent infringement case and had to pay royalties on each '03 produced.) The first attempts at smokeless handgun cartridges were to make high-velocity small-bore rounds. The .30 Mauser, (aka; Broomhandle, aka; C-96) with its 86-grain metal-cased bullet going over 1,300 fps, was quite sensational. But small calibers only work at velocities and bullet weights much higher than either the 86 or 1,300 the Broom-handle Mauser could produce. The advantages of smokeless meant there was no going back. And the advantages of a pistol over a revolver were so obvious that no one wanted to quit trying to make one that would work. Georg Luger got there first. His M-1900 was so advanced that the Swiss immediately adopted it. The American Army bought a bunch, tested them, decided against it, and sold

them. (Thus creating a group of collectors' pieces sought after by many collectors, regardless of their main interest.) Browning designed an M-1900 as well. His, however, was not as well received. It sold well enough for Colt to continue developing it, but its shortcomings meant it wasn't destined for greater glory. Not the least bit put off, Browning refined it, designed others, and basically kept both Colt and FN in business with his pocket pistols. When Browning went to Belgium to sell the idea of his autoloading shotgun, he also took along a pistol prototype, the M-1899. Chambered in the .32 Auto (which he also designed) it was the world's first flat, compact, reliable self-loading pistol that wasn't so big it nearly required a horse to carry it. One design feature that he never used again was to get dual use from the recoil spring: it also powders the striker. The striker hits the primer so hard that when I first saw it I imagined even dead primers would work: The heat of impact would set off the powder. (It doesn't, but wouldn't that be a cool thing?)



The Luger was first, but was soon eclipsed by our own 1911. But it has had a loyal following for a long time.

The M-1900 (as FN called it) sold like hot-cakes. Sold better than hotcakes. It sold so well that in 12 years they had made a million of them. The 1900 cemented the idea of a .32 pistol for police and defensive use in Europe from two main incidents: Soon after introduction, a gang tried to rob a bank in Paris. Armed with M-1900s, they didn't make it out before the police arrived. (I can believe that. I was standing on the Champs Elisee once a century later when a Paris police officer sprinted by. In less than a minute, over 50 of them ran by, from pairs to a clot of over 20. Set off an alarm, get a whole precinct station of *le flic* in your lap.) The gang managed to hold off the police for several days. The reason was simple: the police then had single-action revolvers, 11mm cartridges loaded with black powder. The gang had 1900s, and the guns and ammo are so compact they could have had a pistol, three or four magazines, and 100 rounds of extra ammo in their pockets, and no one would have noticed. The second event was the assassination of Arch Duke Ferdinand. Gavrilo Princep tried to use a grenade, but missed. The driver used the same route on the return trip, where Princep used an FN M-1900 to assassinate Ferdinand, thus precipitating The Great War. Europe was plunged into a bloodbath, and many combatants in that war felt that what we would consider a pocket pistol was "big enough" for defense.

Things changed, but slowly. The first change was during The Great War, when trench warfare proved to all that there were times when a rifle nearly 5 feet long with bayonet attached was too big. And since machineguns of the time were far too heavy to be easily moved, machinegun crews needed sidearms in case they had to shoot in other directions.

The options of the time were many and varied. And only got greater between the wars.

The Germans had the Luger, a 9mm pistol that was the epitome of high-tech in 1908 when it was adopted. It became obsolete in 1911 when the .45 was finalized, but someone forgot to tell the Germans. In WWI they also used the Broomhandle Mauser, known as the C96. The sheer volume of wartime needs also caused them to press a host of pocket pistols into use, a

short-term solution they would need again 20 years later. The British used the Webley, a .45 caliber revolver of great durability, in their low-velocity and heavy bullet weight .455 Webley. Wartime needs caused them to approach S&W and Colt about making additional revolvers in .455. Once the U.S. got into the war, we simply had Colt and S&W change the chambering reamers to .45 ACP and make a few tons of revolvers. The French made trainloads of pocket pistols, mostly in .32 Auto, and contracted with the Spanish to make trainloads more. If pocket pistols were what you wanted, Colt and Browning had them. John Moses Browning had designed a raft of pistols, and Colt made a lot of them. The first, the M-1900, was made by FN, and it pulled them out of bankruptcy. The rest, the Colt .25, .32 and .380, quickly became the world standard, and if you couldn't buy a Colt you could buy a locally made copy anywhere you needed a sidearm. There is a reason many pistols are described as "Browning-pattern."

In the Orient, the Chinese were inordinately fond of the C-96, and even had many made fitted with shoulder stocks. The Japanese began the century with a collection of S&W revolvers, and original designs of indifferent features and usefulness.

You'd think that trench warfare would have caused a change in handgun design, use and training. No. The United States issued the 1911, and every doughboy was glad to have one. Lugers were prized trophies, but for trench warfare the .45 was supreme. Why didn't the experience of the war change handguns? Simply put, handguns do not win wars. They keep soldiers alive, but the generals in charge are more concerned with tonnage of artillery fired. Only the uniquely American tradition of the handgun as a primary weapon caused us to pay any attention. The background of the Western frontier, and the unsettled urban areas, caused handguns to be more than just a badge of office. Let's take Detroit and Chicago as examples. It is almost 300 miles between them. In the United States, 300 miles is no big deal. In Europe, 300 miles gets you through and across several countries. If you start in Berlin, 300 miles later you could be in one of six or seven countries. That is, if you could get across the border. Fleeing Berlin doesn't get you far, you had to stop when you hit a border. (We're talking of pre-War Europe, not the new EU Europe.) A policeman was not expected to do

battle, he simply told people to report to the local police station. In countries smaller than Germany, you could walk to the border, where you'd be turned back. In Europe, 300 miles was a long distance. In Chicago or Detroit, driving 300 miles put you out of the reach of law enforcement. (Again, we're talking of pre-War times.) A police officer was expected to solve his problems, and if that meant gunfire, well then he'd get busy shooting the bad guys. Carrying a rifle while walking a beat was out of the question. First, it was heavy and clumsy. Second, it was too powerful and would shoot through buildings. Third, it would upset the upper classes. (Although they were less squeamish about guns back then, in the "more civilized" areas they'd be put out about seeing rifles.) In America, the gunman was an almost mythical figure. He could be good, the Western knight. Or he could be bad, the depression-era gangster who was a killer for hire. But the handgun was ubiquitous in the U.S. And we carried that idea with us around the world.



In the trenches (and today) a good sidearm or a big knife can be better than a five-foot long rifle.



If you really want to clean trenches, get a shotgun. But the military knows even less about those than handguns.

Between the wars, not much changed militarily. Well, a few things, but not much that mattered. The first was the adoption of the 1911A1, a product-improved pistol with alterations to make it easier for a small-handed shooter to shoot well. John Moses Browning produced a prototype 9mm with unparalleled capacity, 16 rounds. After his death, Deudionne Saive turned it into the lightweight sidearm the French and others desired, the Browning Hi Power. German civilian production created the Walther PP, a double-action .32. J.P. Sauer & Sohns crafted their version of a double-action pocket pistol. The Germans, looking for something as good in performance as the Luger, but not requiring the huge investment in machining that each one represented, came up with the P-38. Every other army in Europe produced a sidearm, the Polish VIS P-35, Czech CZ-24,

then the 27, the Italian Glisenti was replaced by the M-1934, Hungary made a .32, FN sold .32s to everyone else. The Soviets finally got around to replacing their .32 revolvers with .30 pistols (the TT-30 and TT-33) using the same cartridge (pretty much) as the C-96.

What was the fascination with a .32 pistol? Remember, in almost all other armies, a sidearm was a badge of office. In the U.S. a sidearm was a fighting tool. In the British Army, a sidearm was a piece of emergency equipment Officers and NCOs used to stave off waves of natives charging the lines as the men reloaded. Everywhere else, you carried a sidearm because your rank called for it. In that job description, a .32 was as good as anything else and a lot lighter than an American cannon. The Germans stuck with the 9mm mostly because it was what the prized Luger was chambered in.

During WWII, everyone scrambled all over again to produce sidearms. The Germans simply kept production going of whatever handgun was being made in the country they conquered except the Soviet Union. There, the Soviets beat them to it, packing up the arms plants and moving them out of aircraft range whenever possible, keeping them out of the hands of the Germans.



The French asked FN for a 9mm handgun before the war and turned down the Hi Power. After the war they had to make their own, and came up with the MAB-15. The French. What can you do about them?



We made a lot of 1911s back during WWII. And by the early 1980s they were “worn out.” Except for pristine ones in storage, like this Union Switch & Signal. (Very rare, by the way.)



A military sidearm is supposed to be durable. Geez, this Wilson CQB finished off 500 rounds in an afternoon. And has had 30,000 before them. Not durable enough? Sez who?



In the future, we'll all be using stun guns, which this Taser will be considered a crude predecessor of. Until then, keep your 1911s handy.

After WWII, the U.S. Army briefly toyed with the idea that they wanted a lighter pistol, a double-action pistol, and something with less recoil than the .45. They persisted with the idea long enough to stick Colt with the lightweight Commander, and S&W with the M-39, and then dropped the idea for 30 years.

History Of Just The Other Day

You'd like to think that the police and military are paragons of weapons use, design, procurement and training. If only...

When it comes to making tanks, armor officers draw up specifications. Artillery is spec'd by artillery officers. Pilots determine what an aircraft should be and do. Small Arms? I have no idea, but I have some suspicions. I suspect that small arms are designed by officers who insist on being involved. Unlike armor, where no one is allowed to have a say in track design unless they've had to change a thrown or busted track in the field, it seems anyone with an opinion is allowed on the committee to design handguns. But then, I've been called cynical at times. And police departments? I've heard from officers who told me horror stories. Like, the chief won't allow a particular brand because 20 years ago he had an AD, almost shot himself in the foot, and ever since then won't touch that brand and certainly won't allow it for departmental issue. Or just the opposite. The Sheriff, who can't hit the broad side of a barn and hasn't shot a qualification course in 10 years, insists the department issue a particular brand simply because he got lucky when he walked into an armed robber. He survived, the two incompetent gunmen didn't, and he credits the gun instead of his own sheer luck.

Just over 20 years ago, the armed forces found themselves in a fix: their stockpiles of 1911 and 1911A1 pistols were wearing out. The newest ones that had been bought in any volume (there had probably been a few Colt guns bought through the years) were the last batch of WWII contract guns, made in 1945. The 1911A1 was thought to have a number of faults: It was inaccurate. It was hard to control. The recoil was ferocious and required medical attention after a day of practice. It wasn't safe, the hammer had to be left cocked to shoot quickly. It wouldn't penetrate "stuff" (this was before body armor became prevalent, but many could see it coming) well enough. It lacked magazine capacity. But worst of all, it wasn't cool. Cool guns back then had lots of bullets, bullets that penetrated well, had little kick, and could be loaded and left loaded, safely. All a load of bull, but you knew that.

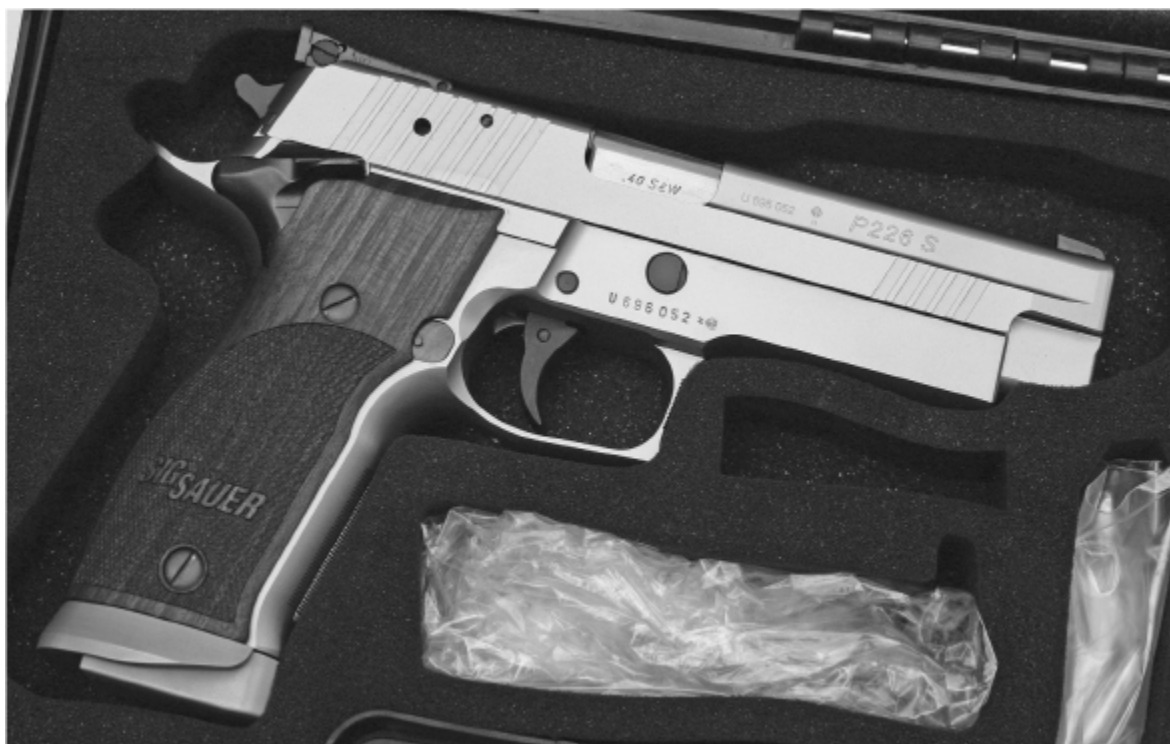
And, the armed forces had another problem: too many handguns. Oh, not "too many" as in "We have warehouses full and we can't keep track of them" but too many as in "Why do we have seventy-zillion types, models and calibers?" Again, the various services had purchased so many kinds of handguns in various wars, emergencies and procurements that it wasn't

possible to keep track of them all. In addition to .45 and 9mm, the national stock number listings for handgun calibers had things like .38 Special, .38 S&W, 9mm, .45 ACP, .45 Colt, and .357 Magnum. And each caliber had to have most or all of the variants: ball, tracer, dummy, target, blank, proof, AP. So a supply NCO had to be absolutely sure he was ordering just the right ammo for the pilots on an airbase, issued .38 Special snubbie revolvers, and for the entrance guards, issued .45 ACP 1911A1 pistols, and the CID (Criminal Investigators, military detective) with their .357 Magnum S&W M-19s, and so on, and so on...

Faced with all that, the armed forces did what any such group would do: they formed a committee to come up with a replacement. I find it curious that they neglected an obvious step that any prudent planner in a business would include: the cost of upgrading the current tool. Any engineer who looks at a pump/compressor/lathe or whatever and says "This thing is getting old, we'd better find a replacement" had best go talk to the accountants first. If he can't prove with real numbers that a new machine will cost less than repairing/rebuilding the old, he won't get approval to spend the money. Not so in the military.

No, the Joint Services Small Arms Program was called in, and set about determining just what the "perfect new pistol should be." They conducted elaborate tests such as freezing pistols, subjecting them to rigorously defined dust, mud and dirt tests. They tested accuracy. They tested durability. And they found out some interesting things. First, the newest 9mm double-action, hi-capacity pistols available in the early 1980s were not any more reliable than the "unreliable" 1911A1s they were using as standards. As a college graduate with a degree in a technical field, and versed in the scientific method, I was aghast that they would test brand-new 9mm pistols against whatever 40-year-old 1911A1s they happened to pull out of storage. And pleased that the old warhorses were doing so well. Why should that matter, you ask? Think of it this way: if you were going to try to sell trucks to the army, and compared your modern, brand-new trucks to the army trucks in use, 20 years old and with a million miles on them, how far would you get? The first question anyone would ask would be "How do your trucks stand up compared to other trucks we can buy right now?" So, if you're going to compare accuracy and reliability of service pistols,

compare the then-new (ca. 1983) 9mm pistols with then-new 1911A1 commercial pistols. After all, if the armed forces were going to buy new pistols of the old kind, they weren't going to be buying 1911A1 pistols from the stash Colt still had from 1945, were they? But it gets better.



The new Sig Xfive is an outgrowth of development of the 226. Another case of a combat pistol growing into a target pistol.



Supposedly the Glock wasn't ready for the JSSAP trials. I'm sure it would have done well, since it owns the U.S. law enforcement market today.

The JSSAP also found out that the 9mm pistols weren't particularly accurate. The cause was a combination of factors, but primarily the ammo was to blame there. In the early 1980s, no one shot 9mm pistols for accuracy. If you were target shooting you would shoot .38 Special wadcutter ammo, or .45 match, or .45 hardball in Service matches. Ammunition makers knew this, and put their time and effort into developing match ammo for those guns and calibers, for those uses. The 9mm full metal jacket ammo made then was seen as "plinking" ammo, stuff you'd feed a surplus 9mm brought back from WWII. The JSSAP had to stop and quickly develop Match 9mm, ammo that was just as good as the .45 ammo they were testing against. We now have 9mm pistols accurate enough for any competitive use.

And the JSSAP produced their results: the perfect 9mm pistol was the Beretta M-92. Now I'm not saying it is a bad gun. I have one. (But then, I have one of everything.) But the JSSAP testing was not nearly as thorough and definitive as they thought. And the JSSAP is still around, 20 years later. One can only hope they've learned since then.

The intention was simple: reduce the dozens of pistols, and 100 or more ammunition listings in the NSN stock books, with one pistol and six loads. That would make supply-related and training issues a lot easier. (Anyone remember the M-14 program? That rifle was not only going to replace the M-1 Garand, it was also going to replace the BAR and the M-3 submachinegun. It failed. All attempts to make "one gun do all" will fail.) And the new sidearm, with its softer recoil should make training smaller-statured troops (read: women) easier. I'm sure someone was also anticipating that the reduced recoil could reduce training requirements and ammunition consumption. Well, it didn't work. The Beretta has a larger grip, making it more difficult to hold for those with small hands. The reduced recoil of the 9mm was offset by the higher bore-to-hand gap, increasing the leverarm available to the slide and thus felt recoil. The Marine Corps refused to turn in their 1911A1 pistols. They insisted that some units had a need that could only be filled with a .45 pistol, and kept theirs. They even scoured depots searching for more, to stock up. The Marine Corps has only been partially successful in keeping the 1911A1 in use. The Special Operations Capable units have them, but all other Marine units were forced to adopt the M-9. Bitterly, begrudgingly, they turned in the 1911 and 1911A1 pistols, and accepted the M-9. Now that the inevitable has happened in Iraq, there are grumbled protestations that the 1911 should never have been dropped.

Then some units, like the CID, pointed out that the Beretta was too big: carrying one concealed wasn't possible. Beretta didn't make a Compact M-92 (now adopted as the "Pistol, 9mm, M-9") so the armed forces adopted the compact Sig Sauer, the 228, calling it the M-11. Other branches and units got into the act: the Navy SEALs didn't like the M-9, and simply bought a truckload of the full-size Sig 9mm, the M-226. The U.S. Army Tank-Automotive and Armaments Command at the Rock Island Arsenal,

recently contracted for 5,000 Ruger P95D pistols, further muddying the waters.

The Beretta was not having a good time of it. It turned out that the JSSAP had not done nearly as good a durability-testing job as they had thought. And as was typical of all European firearms companies of the time, Beretta grossly underestimated the volume of shooting we crazy Americans did. In a European police force, or military, back then (and for all I know, still today) an officer will shoot a magazine or two out of his pistol annually. That's right, the annual practice and qualifications might consist of shooting the ammunition he has been carrying all year, and replacing them with fresh rounds. In his whole career, he might shoot 600 rounds. If you design a pistol with a service life of only 5,000 rounds, that sidearm is good for eight policemen's careers. For a lot of American shooters, 600 rounds was a busy weekend (I just shot that many rounds in one afternoon, in testing a couple of handguns.) US military units would designate "range guns" and everyone would shoot those. Not because they are trying to reduce wear and tear on the rest, but because it is simply easier in the paperwork to draw a few and use them endlessly, than draw them all from the Quartermaster and then turn them all in at the end of the session. It wasn't unusual for a range gun to get 10,000 rounds a year even in peacetime. Guns broke. Parts broke. Then there was the slide fiasco. For reasons known only to themselves, a customer of Beretta asked for slides with a minute amount of the alloying element Tellurium. For reasons equally unknown, Beretta made them. As it turned out, those slides were brittle, and broke. Picatinny Arsenal conducted a metallurgical analysis of slides close to those in serial number to the slides that fractured. The element Tellurium, added for sulphide shape control in the AISI 8640 re-sulphurized steel, which is accompanied by low fracture toughness. How much of a difference does the Tellurium make in slide strength? The Te-containing slides have fracture strengths of about 40 ksi V in. and those of the other alloy used have a higher K_q of about 71 ksi V in. Importantly, official reports of the analysis remarked "While slides with adequate failure toughness do eventually fail, they do so at considerably higher round counts, and more importantly, they do so only after a plainly visible crack grows, warning the shooter of the impending failure."



The Ruger P95DC, which the Army bought 5,000 of recently. So much for “one handgun fits all.”



Serious competition shooters like Ted Puente go through more ammo in a year than many European police officers do in a career. No wonder durability gets tested harder here in the States.

The Beretta slide design was such that the broken half would exit the rear of the frame. For a while, armorers were instructed to replace slides at the 1,500-round figure. While the matter was being argued, the army said Beretta slides were brittle. Beretta said the ammunition was over-pressure. They were both right. The alloyed slides were eventually tracked down and replaced. The ammunition quality was tightened up. Still, as late as 1995, things were a mess. I was in a handgun class that summer that had a pair of Special Forces NCOs in it, and they traveled with a toolkit and parts bag of all the minor stuff needed to keep a Beretta working. Still, one of their Berettas broke its frame the first day, something they could not fix. So I loaned them my Beretta for the rest of the day. As thanks, they gave me the parts kit (“If you keep shooting yours, you’ll need these eventually.”) and an ammo can of the ammo they were using. Yow! The 125-grain full metal

jacketed bullets chrono'd 1,275 feet per second out of my M-92 PS-F. A bit of explanation: In USPSA/IPSC competition, there are two power levels, Minor and Major. Multiply the bullet weight in grains, times velocity in feet per second, and you have Power factor. Minor is anything over 125,000, while Major is anything over 165,000. .45 ACP makes major, as do specially loaded .38 Super ammunition for Open Division competition. That ammo they gave me posts a 159,000 factor. No wonder the Army was breaking guns.



The military is very forgiving about “marksmanship.” This target pops up when the computer tells it to. If you hit it, anywhere, it falls. And you get a score. Shoot low and splatter it with gravel, and you’ll get a score. Sigh.



Size and weight, the same. Bullets? Fifteen big, or seven small. You decide. At least the 1911 slide has never come off.

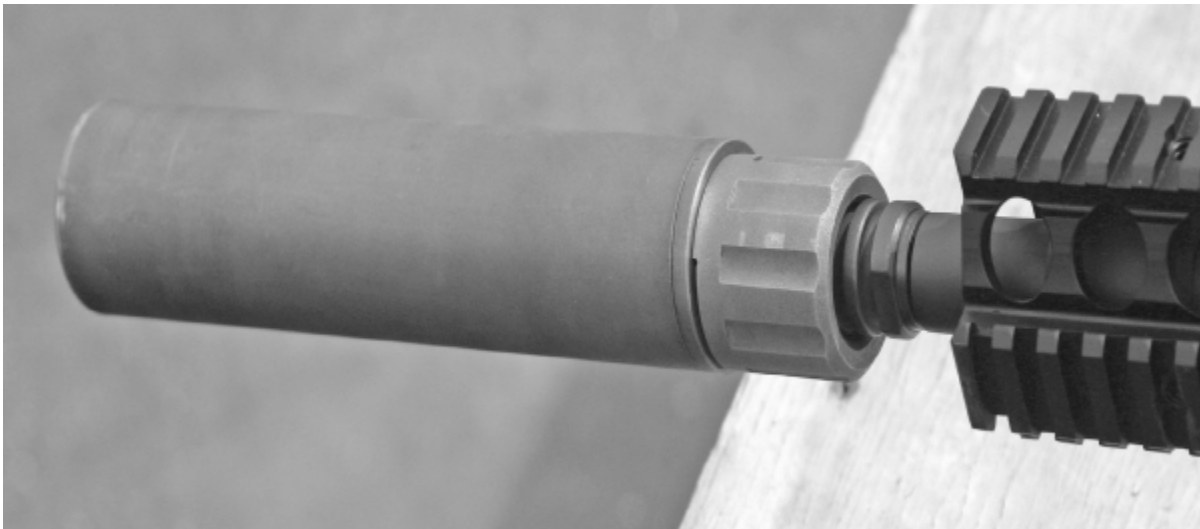


For those who think a 1911 is big, handle a Mk-23 some time. That's it, under (and outside) the 1911.



Enough controls for you? A thumb safety (rear) for cocked and locked and a hammer-dropping safety? Why?

Just when you thought it couldn't get any more confused and exciting, someone in the armed forces came up with the idea of an "Offensive Handgun Weapon System." Instead of simply viewing the sidearm as an emergency tool that you use to fight your way to your rifle/smg/machinegun/radio-for-air support, the OHWS was used in house-to-house fighting, and to take out sentries. Just to prove that whoever drew up the specifications hasn't a clue about how a handgun is used, I'll list them for you. (If the person who thought these up is reading this, nothing personal, but what were you smoking?) Might I mention here, for those of you looking to get anything adopted by the armed forces, that you simply must use the correct terminology. Any proposal that does not include the word "System" in it will be summarily rejected.



Weapons designers have this fixation on suppressors for handguns (this is not one, by the way) for reasons only they can understand.

It had to, first of all, be .45 ACP. And have a 10-round magazine capacity, minimum. (Later made 12 rounds.) It had to be capable of accepting a suppressor. Silencer, for those of you who haven't been keeping up on the evolution of technospeak. It had to have a service life of 30,000 rounds. It had to have the ability to accept a tactical light, laser module and a whole lot of other stuff. It had to deliver match accuracy. It had to do everything but sing and dance, brew coffee and loan you money. I can't help but think at the moment of the old adage the "A camel is a horse

designed by a committee. As with the JSSAP, the USSOCOM (United States Special Operations Command) did not for a moment think that the 1911A1 might be brought up to spec. God forbid. Never mind that even then (the early 1990s) IPSC competitors had proven that properly-built 1911s could deliver match accuracy for much more than 30,000 rounds. That suppressor makers could build “cans” capable of cycling a 1911. (The extra weight of the suppressor can be a problem with a tilt-barrel system found on Browning-designed pistols.) As for long-term durability, again, IPSC shooters showed the way: If you built guns out of proper steel, not mild steel lacking heat-treatment as was the case with so many WWII pistols, the 1911 lasted forever. No, they never considered it, they simply asked for something new. The winner was the H-K Mk-23.

Once the testing was done, the USSOCOM bought a whole bunch of H-K Mk-23 pistols. They were everything the specifications asked for, and they were big. More than one wag has referred to the Mk 23 as “the worlds only crew-served pistol.” And at \$1,900 per, it was twice the cost of a bare-bones but well-built IPSC 1911 pistol. Remember the makeup commercials some years ago, where the actress Kelly LeBroc asked us “Don’t hate me because I’m beautiful?” Well, don’t think badly of H-K because they made the Mk-23, and you can’t hold it to shoot it. They delivered what the committee asked for. They did a great job with the requirements, and delivered a pistol that does everything the requirement asked for. That the requirements were silly is clear. The effort was not a waste of time, for it lead H-K to build the USP series, a much more suitable set of pistols for sidearms than the Mk-23.

Then we got involved again in Iraq. We found that the Beretta really, really doesn’t like dusty sand. I’ve talked to troops over there who cleaned their M-9s daily, and then had plastic zip-lock bags that they then enclosed the pistol in and holstered the plastic-bagged gun. Yes, it makes for a slow draw, but at least once they’ve torn the bag open the clean gun will work. Or will work if it has real, Beretta-made magazines, and not the wretched Checkmate brand the army bought. Why’d they buy them? Ask the legislators who passed the Assault Weapons Ban of 1994. With no real market for hi-cap magazines the manufacturers pretty much stopped making them. Oh, they made them for the police, but often as not what they “made”

were contracted out to a magazine manufacturer who could be trusted not to leave them in the lurch. The Army found no ready supply when they needed more. In the world of “low bidder wins” the Army bought magazines from a company unversed in magazines, rather than purchase magazine shipped over from Italy. Stateside, in training, the Checkmate mags worked fine, or at least OK. In the dust or Iraq, they proved unreliable.



Out in the weather all the time, a military handgun has to be tough. A good holster helps. This is a Blackhawk flap holster that fits on MOLLE gear.

The bulky Mk-23 had no friends, and while Glocks could be counted on for reliability, the 9mm wasn't popular and Glocks aren't "in the system:" as in the armed forces supply system. Private-company contractors could get them, but not the Army, Navy, Air Force, Marines or other services. 1911s, however, just kept working. And surprisingly, when the cries went out for more 1911s, there were guns hidden in depots. Not as many as requested, but a lot more than suspected. I've heard it said that there are two

kinds of 1911 owners in Iraq: “Those that have them, and those that want them.”

What Are We Looking For?

Keep in mind Rule #1 concerning any military unit: The purpose of an army is to kill people and break things. Yes, they can also paint schools and drill wells and inoculate children. But we have people who can do that. They are called general contractors or nurses. You do not call on a carpenter to laser-tag a machinegun emplacement for the incoming 500-pound bomb. The modern military, at least as trained and equipped by the U.S. government, is incredibly lethal.

The military really doesn't know what to do about handguns. On the one hand they are very handy for those situations where you really need them. But on the other hand, they're so concealable and... unsafe. Those of you who are in the “gun culture” cannot easily comprehend just what the military environment is like. I've never been in the military, but I've been around those who are or have been, all my adult life. In a peacetime environment, guns are kept locked up. You know those old WWII movies, where you see the soldiers in their barracks with racks of rifles at hand? Not a chance. First, the buildings are now concrete block construction, noisy and bare. Second, the weapons are all under lock and key. A soldier in the National Guard will go each month to the armory where “his” rifle is kept, but most of the training will not involve that rifle. And at least until the recent fracas, he would not fire that rifle except on annual training. Regular units would not be much better. Unless you were in a combat arms unit, you'd spend more of your time while enlisted doing the specialty the Army taught you. My friend Duane Thomas was a jump-qualified Clerk/Typist in the 82nd Airborne. He spent most of his time exercising his essential skill the Army had identified: touch-typing. He fired an M-16 once a year, during annual qualification. The rest of the year, his tool was a typewriter.

Firearms are unsafe. Military careers have been ended due to firearms accidents, and not just the career of the soldiers firing or being struck. As a result, the system was set up to minimize contact between soldiers and

firearms. So the thought of issuing large numbers of sidearms was doubly scary.

What with the combat in Iraq and Afghanistan, and the number of soldiers, Marines and airmen getting practice carrying a loaded firearms 24/7, and those getting in “trigger time,” the attitude may change. I’ve just heard that the Army is issuing rifles much earlier in the Basic Training cycle than previously. Almost as soon as the Marines have for a long time. But when peace breaks out will the services go back to the way things were? Time will tell. But we still don’t know what the military is looking for.

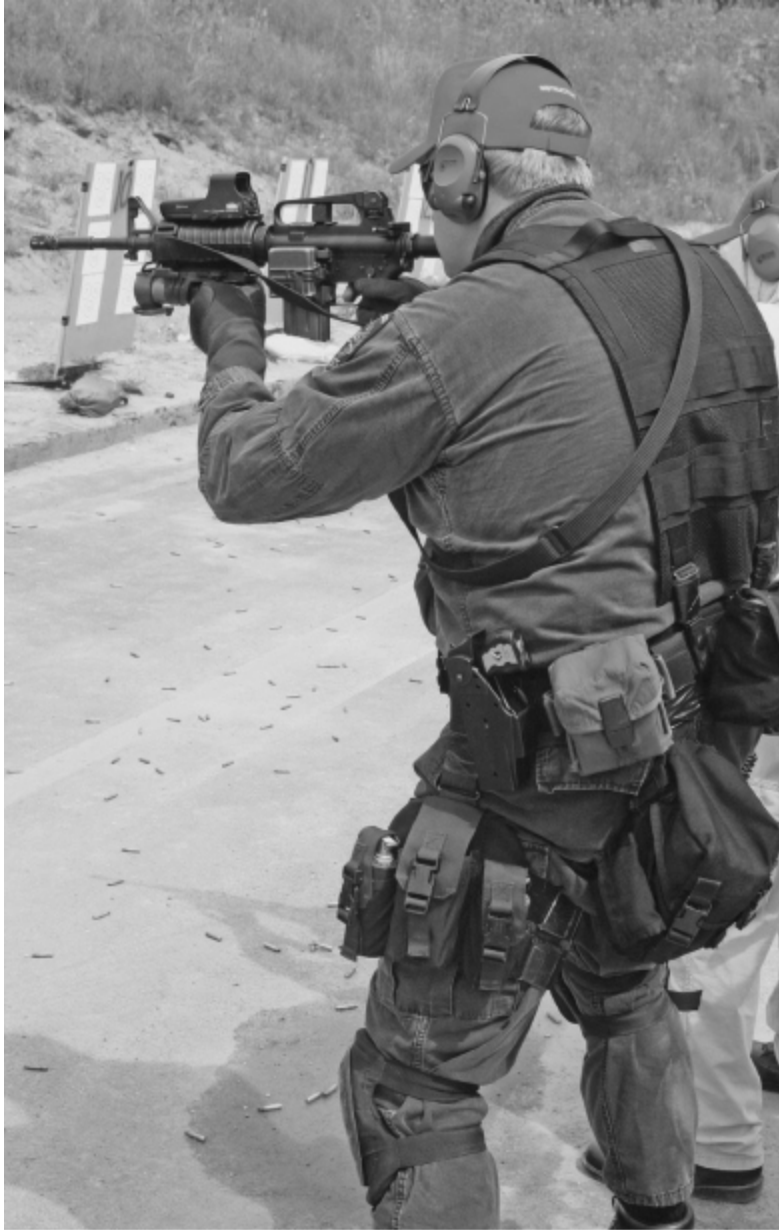
I break it down to two things: a mindset issue and an environmental issue. In the mindset issue it is a struggle between those who actually shoot people, and what they want, and the planners and thinkers who may not have ever shot people, and certainly haven’t done so in the last couple of decades. The former want something that will get their delicate derrieres out of a tight spot, preferably by offering the “other guy” an early and messy retirement. Light doesn’t matter too much, unless you’re talking illumination. Heavy is fine. Big is OK, provided it doesn’t get too big. A sawed-off shotgun is very handy in some situations, but not exactly compact enough to fit a holster. Above all other issues it must be reliable to a fault, durable as the owner, and sufficient to the task of killing people quickly. (Let us not beat around the bush. We issue firearms to the military so they can kill people and break things. That’s their job. We should hope they do it well and safely, on our behalves.) The second group is consumed with what I call the “generals and truck drivers” imperative.

The second group works in air-conditioned offices and draft sets of requirements, thresholds and tests. They rub elbows with, or are, flag-rank officers: generals or admirals. You have to be pretty smart to be a General, and you have to be persistent, to have hung in the system for nearly 30 years. That is not to say they are all rocket scientists. As with any group, you’ll find some there who are better at gaming the system than at serving the system. One thing you must be aware of is that generals have egos. You don’t make it that far by being the shy, retiring type. And the rank brings status. Considering the actual threats a general would face, an appropriate sidearm would be a Colt or Browning .25 auto in a holster the size of a cell

phone pouch. But a .25 is not a “man’s gun” and none would consider it. You don’t think there are social judgments made about firearms? Watch the entertaining but silly movie *Mr. & Mrs. Smith* with Brad Pitt and Angelina Jolie. As they’re gearing up, he hands her a firearm. She pauses, looks at it and says “Why do I get the girl’s gun?” Choices matter. But if you pick the wrong one, the general’s aide is going to give you a call: “The General was wondering if you had something lighter? The issue piece is heavy and bulky, and it poses a problem.” The truck drivers? That is the yardstick against which all sidearms or Personal Defensive Weapon (PDW) choices are always made. It has to be compact enough to fit in the truck cab. It would be nice if the driver could use it while driving. And since truck drivers don’t get much firearms practice (not their fault, range practice is scheduled by higher-ups who obviously know better what’s important) it would be nice if you didn’t need a lot of practice to get effective results. (Yes, and I’d like to grow more hair on my head just by thinking happy thoughts. It ain’t gonna happen.)



In the trenches in 1917, a 1911 and a big knife were good to have. Today, in a whole lot of places a 1911 and a big knife are good to have. Yes, a lot has changed.



This SWAT operator takes his gear home at night and takes care of it. In the military, he'd probably have to turn the weapons back in to the supply Sergeant before going home.



In military units, you get issued something because your job requires it. The Europeans are big on marking weapons with the unit designation.



Before Iraq, the idea of teaching each and every soldier or marine the basics of how an AK worked would have sent shivers up the spines of the liability brigades. Now it just makes sense.

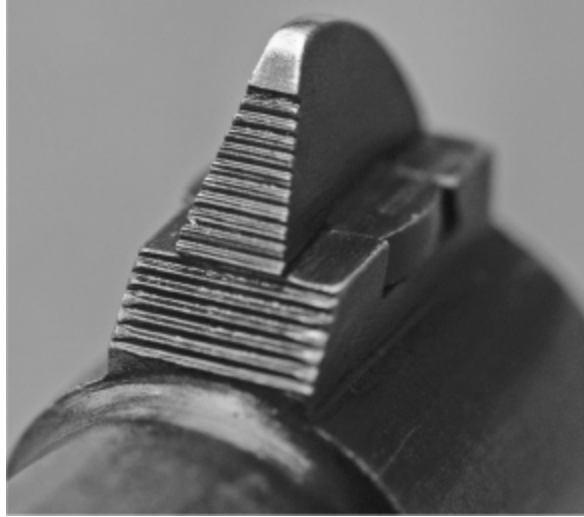
So handguns are always downgraded by the chair-borne commandos (“CC” for short) for the simple reason they can’t get truck drivers to hit targets without actually practicing. Practice costs money and time, and exposes those in the chain of command to the risk of accidents. (Man, I’ve really got to get to the source of this irritation I have with Higher Authority.)



The M-3 Greasegun is a basic smg. And utterly reliable. (My Dad loved his.) For a whole lot of uses, a whole lot more useful than a handgun. However, hitting targets at 200 and 300 meters? Come on.

What does that leave? In the old days, it left a submachinegun. The exemplar of the cost/benefit ratio was the Sten, closely followed by the US M-3 “Greasegun.” Both were submachineguns (and right now I’m switching to “smg”) made from steel tubes or stampings, at a cost so low it sounds silly. As in, when done in volume production for wartime, made for between \$10 and \$20 each. But smgs suffer from several “problems.” One is, they lack range. Past 100 meters or so, you’re pretty much guessing where you’re hitting. Given the close nature of most combat, that isn’t much of a problem, but it is one the CC always bring up. The legions of CC are always looking for ways for unpracticed truck drivers to be able to put effective fire on targets at 200 and 300 meters. Military sights often are a problem. Handgun sights have traditionally been sketchy at best. The old Luger was a perfect example of a sight so bad it was almost useless. A pyramid front, in a V notch rear, and both so small you had to search for them? What were they thinking? The bigger problem is lack of penetration of handgun calibers. The typical smg is chambered in 9mm. When using ammunition with steel cores or jackets it isn’t too bad in penetrating chance

obstacles or incidental cover. But you really can't hammer a hole in a wall with one. Not that anyone wastes time doing so with an M-4 or M-16, either. Bigger calibers hit harder, but penetrate less. (Mostly because no one makes steel-cored or jacketed ammo for the smgs chambered in .40 S&W or .45 ACP.)



The Luger front sight is typical, and nearly useless.



The Luger rear sight is almost non-existent.



The H-K UMP, a newly designed smg. Using polymers, it has to be easier and cheaper to make than steel smgs. But it is still a pistol-caliber carbine.

Waitaminit, someone objects “Why not put a shoulder stock on a handgun?” Lets take a look at that. The typical approach is to slap a stock on the back and shoot it as a short rifle. Problems abound. First, the sight radius isn’t any longer, so the accuracy increase is marginal. So, to make the sight radius longer, we make the barrel longer. Fine, accuracy increases (velocity, too, to a small degree) but now we have a different problem: the

thing's too big. The whole point of a handgun is that is it, for lack of a better term, handy. Once you start making it big enough to be a faux rifle, it gets to be un-handy. Ok, let's make it worth packing, and make it select-fire or full auto. Fine, except we're back to that very high rate of fire handguns have, 1,200+rpm. Last is cost. If we take for example a Para Ordnance 9mm hi-cap pistol (just to try and make our stocked handgun as capable as possible), put a stock on it, stick a hi-cap magazine in it, and make it select fire (stop drooling, you in the back) we have a pistol/smg/stocked PDW. It holds 30 rounds or so, it fires at 1,200 rpm, and it costs \$1,000. For the same size and weight, we can have a 9mm Sten gun. It holds 32 rounds, it fires at 600 rpm (a better rate) and even in small production lots it costs about \$300. Accuracy will be about the same. Why spend \$1,000 when we can spend \$300? (I know, a silly question when we're trying to get Appropriations through the Senate Committee.) If we double what we spend, Colt will be more than happy to sell us all the 9mm smgs or 5.56 Commandos we want. Ditto H-K with either the MP-5 or the UMP. No, stocked handguns are not a solution.



Add a stock to a handgun and you end up with...a clumsy handgun. This Lahti has been fitted with target sights, hardly an improvement on handiness.



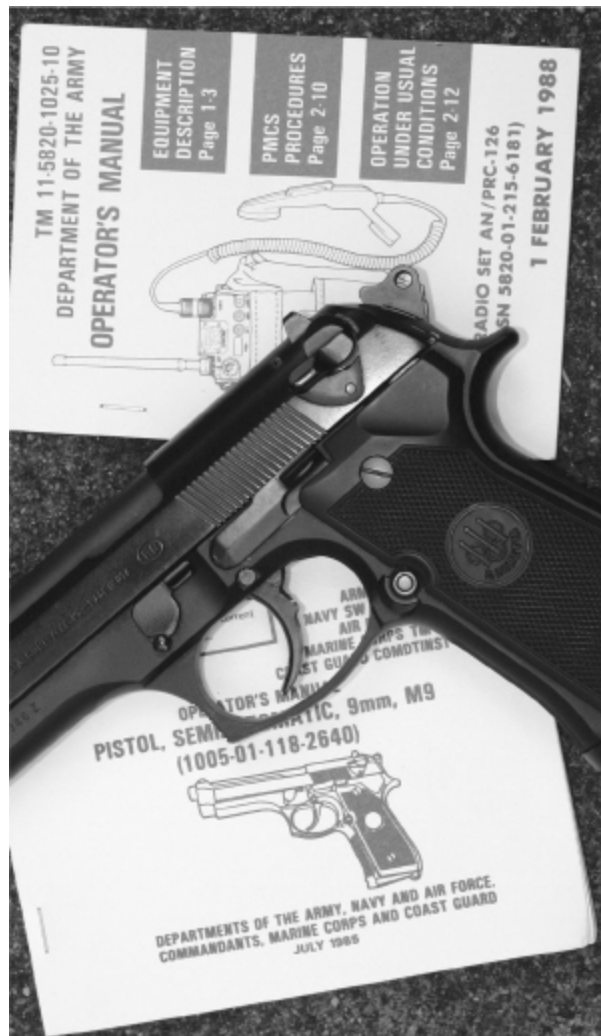
With rifle makers making rifles more compact (here is an FN-2000) what do we need smgs for?

Smgs hang on because they are handy and relatively cheap. H-K still makes some, and there are lots still in many inventories. But their biggest fault is that they aren't sexy enough for modern sensibilities. Thus we have such attempts at handgun replacement as the FN P-90. It offers a low-recoil/sufficiently-penetrating cartridge in a compact package. (Can anyone say "M-1 Carbine?") With a 50-round magazine and an optical sight, the low recoil should allow those truck drivers to get at least some hits. But as it is the size of an old-style video camera, I can't see Generals packing one just to be armed when it is socially acceptable to be armed.

The environmental issue is this: in a military context, handguns aren't secondary weapons. Most of the time they are not even tertiary weapons. To the law-abiding citizen carrying, or the police officer, the sidearm is the primary weapon. If things go bad and you need more, and have time to get it, you get more. But the handgun is what you can count on always having. In the military context, things start with large explosives. A "primary weapon" for a soldier might be the F-16 loitering around, loaded down with laser-guided 500-pound bombs or a 20mm cannon. The soldier uses his

is
air control) and requests an air delivery. Then coordinates the timing of approach, release, laser targeting and clearance of adjacent units. Even for the trigger-pullers in the front lines, there are belt-fed machineguns, rifles,

shotguns, grenades, rocket launchers and armored vehicles, and other soldiers with all of those to call on. You have to get pretty far out into “trouble-land” before you have used up all those other choices and need a handgun. For a whole lot of soldiers a big knife with a sharpening stone in the sheath pouch is a better option for weight and bulk. They’ll spend more time using the knife than the pistol. (Then again, some Chairborne Commandos even have a problem with big knives. They forget the basic operating principle of military units.)



When it comes to what matters to the unit, knowing how to use the issued AN/PRC-126 will get more enemy combatants killed than the Beretta will.



Lanyards are “In” again. If it isn’t tied to you, you’ll likely lose it.

What is causing the handgun selection issue to stay stalled are two things: triggers and point of origin. The CC want a double-action, or a hammer-dropping safety, or a DAO, or something “safer.” As Jeff Cooper has pointed out decades ago, and will gladly repeat anytime anyone asks; Safety is something that occurs between your ears, not between your hands. If you want safe troops train them to be safe. You can’t give them a five-minute lecture on firearms safety and then simply hand them a sidearm that will be safe against all mistakes. The cocked-and-locked system of the 1911 is viewed as unsafe. But the door-kickers aren’t interested in arguments about how much “safer” a DAO trigger is, they want a hammer to hit bad people with. And their experience has been that the 1911 is the better hammer. Many of them do not hold with the “need” for a DAO trigger. Consider the entry team going through a door in Iraq: four men. Between them they have four M-4/M-16 rifles, at least one breaching shotgun, 840 rounds of 5.56 ammunition, smoke grenades, fragmentation grenades, white phosphorus grenades, pop flares, sledgehammer, crowbar, halligan tool, half a dozen big knives, body armor, helmets, radios, first aid gear and at least as many good luck charms as knives. The follow-up team has all that, plus one of the M-4/M-16s may be replaced by a belt-fed Squad Automatic Weapon, and often the mechanical door-busting tools are replaced with explosive breaching charges in case they come across a door they can’t shoot or beat

open. The breaching charges may be Det cord, cutting charges or a bag full of “eight ball” charges (1/8 of a block of C4) and blasting caps, fuses or other igniters to set off the charges. They are accustomed to being careful, as everything they use can hurt or kill them and everyone around them. The team gear would ideally include four sidearms per team, one per man. (Probably in current issue more like one or two.) In all that gear, do you think that the trigger style of the sidearm is going to make any difference safety-wise? If the team and its members have good safety habits drilled into them, they’ll be OK. If they haven’t, something else they are carrying is going to kill one or all of them long before their own sidearms have a chance to.



Handguns and knives don't penetrate body armor. So plan to shoot or stab around the armor, and don't leave home without them.

In an ideal world, the military would go back to the 1911A1, upgraded to the 1911A2, with a light rail. What would it be like? Look in the Defensive Selection chapter and see what my hypothetical police department would be issued. And for general officers, simply issue what I'd issue to female police officers. No slam, they may need a sidearm, but all the big guns in the large calibers should be going to the entry teams and

patrol units walking the streets of Baghdad, or the rutted roads of Afghanistan.

Penetration

One strike “those who know better” always make against handguns is the lack of penetration. I guess if you’re used to thinking in terms of tank cannons that shoot holes through other tanks, or heavy machineguns that shoot through walls, then yes, handguns lack penetration. But just how much do you need? In the early days of body armor (as in back in the 1980s) handguns couldn’t get through body armor. Except they could. Steel-jacketed or steel-cored 9mm had no problems zipping through soft, concealable body armor. They stopped in armor that stopped rifles.

The newest bogeyman is the Soviet-designed “Crisat” armor. A laminate of various materials, including some Titanium sheets, it apparently stops everything short of nuclear radiation, bills from the phone company and the sound of Geraldo Rivera’s voice. Even some rifle bullets. We issue to our own troops armor plates made of a ceramic outer layer, with a steel backing layer to stop fragments of bullets and busted ceramic armor. So, we’ve got armor good enough to stop some kinds of rifle bullets, and you’re complaining that a handgun can’t get through it? What are you, nuts?

Handguns are for close, desperate encounters when everything else has failed. Saying a handgun is useless because there is body armor it won’t get through is like saying a bowie knife is useless for the same reason. Here’s a hint: in a hand-to-hand struggle you don’t try to stab someone through the body armor. A handgun that you have with you, even if it won’t get through body armor, is better than a rifle you don’t have (or is broken, missing, or out of ammo) that might.

And you certainly don’t use a handgun to lay down a field of fire, or reach the bad guys through a wall or other chance barrier. For more on penetration, check out Chapter Five.

The Future

In the future, we won't even use bullets. The military is already experimenting with various noise, light and chemical weapons that stun or disable opponents without the messy need to shoot them. However, until then, we'll be using bullets. And when it comes to handguns, those in the know, those who are likely to get their hands dirty, want handguns with big bullets. In the future, we can count on seeing the 1911 for a long time. My personal prediction is this: if we get to the point where we're steering ships between the stars, you can count on the first starship having the following: at least one 1911 pistol. At least one bowie knife. And at least one roll (probably more like a case) of duct tape.

As long as there are handguns, there will be 1911s.

Chapter 4

Mud and Dust Tests, Drills to Practice

And ice, and water, and all the other tests the devious minds of several gunsmiths could come up with. The 1911 has gotten a lot of flak in the past for being an unreliable firearm. Back when Bull's-eye was the game, you could have a reliable gun, or you could have an accurate gun. When IPSC came along, shooters insisted, and gunsmiths learned how to build, pistols that were both. But somehow the 1911 still has the image of a prissy competition queen. Shooters in love with all things “tactical” love to sneer at the “two thousand dollar competition guns that need to be cleaned between stages.” They obviously haven’t been to many USPSA or IPSC matches if they think that is the case. The tests are simply to see if we can get a pair of 1911s to continue to function through the tests that the current “gold standard” works through: a Glock.

Before we get started, I have to tell you; this is dangerous stuff. If anything goes wrong, there’s a busted gun as a sure result and perhaps an injured author. **DO NOT DUPLICATE THESE TESTS.** If you do, you’re on your own. I offer them only as an illustration of severe testing, and what you might (I repeat MIGHT) have to do and get away with in an extreme defensive situation. Read, enjoy, speculate, but don’t do this at home. Nor at the range.



The Glock is considered the paragon of reliability. Granted, they work well, but it isn't like they're head and shoulders above all others.



The Wilson CQB we've worked through two books, a bunch of magazine articles, and at last count some 30,000 rounds.

For this test series, I started by selecting two 1911 pistols. At the top of the heap, a Wilson CQB. This gun has distinguished itself for having survived the interim between volumes of this book. It went through the testing then, and has been with me ever since. I have used it as a loaner in classes, put many thousands of rounds through it, used it as the test bed for the .460 Rowland research, and generally shot it every chance I had. It has never failed. If you think that I've selected it because I've "shot it loose" you are very much mistaken. While it would not be confused with a brand-new gun, it is still tighter than a whole lot of new guns would be right out of the box. And it is still a tack-driver. Were Bill Wilson and the crew to simply strip the old finish and apply a new one, you'd be very hard-pressed to tell this from a new gun. At the other end, and with all due respect to Charles Daly, I included a bare-bones gun. No one will ever confuse a Charles Daly with a CQB, but that doesn't mean it doesn't work. It just isn't

as re-fined. Where the Wilson is made with forged slide and frame, the Charles Daly is obviously a cast frame. And the slide-to-frame fit is a lot closer to rattley old WWII guns than it is to the fitted CQB. After the first book, I was so impressed with the Charles Daly that I bought it. Since then it hasn't gotten nearly the volume of ammo that the CQB has, but it hasn't just been languishing in my safe. I have made one change to the Charles Daly since then: I replaced the extended slide stop lever. My grip and that lever proved to be incompatible. So I swapped it for a standard lever. However, I still had the CD slide stop in the box, and re-installed it for the testing.

In the course of doing the tests, and discussing it with my various editors, I found other makers were interested in getting in on things. So I ended up going through the tests one and a half times, adding a Kimber Warrior and a Rock Island Armory base gun to the tests. I didn't put the CQB and Charles Daly through the steps I had already done, but simply "caught up" the Warrior and RIA, then continued on. As I thought of new tests, I subjected all four to them and reported on the results.

We all know that magazine selection is critical to reliability. However, I had a lot of ammo to go through, so I couldn't afford to get picky and only use a select batch of magazines. The standard Glock advertising test is 100 rounds after each "exposure." 100 rounds is 12 and a half eight-round magazines. For four test guns that comes to 50 magazines. As I don't have 50 magazines of the same brand and capacity, I just grabbed magazines of known reliability out of my storage bin and hauled along a bunch of test ammo.



The Charles Daly under the front wheel of my truck. It came out without a scratch.



The Wilson CQB and Charles Daly, with their scheduled ammo diet. Much abuse is in store, and they're up for it.

The tests were simple: each was fed a diet half of Black Hills 230-grain full metal jacket ammo, and half Armscor 230 FMJ. For the 1911s, 230-

grain jrn, where the Glock tests were done to a G-17 in 9mm Parabellum. The Glock test series involves six elements, which I added to as the experiments unfolded.

Test #1 Frozen in ice

The test Glock did was to freeze a gun in a block of ice for two months, then chip it out and test fire it. Fine, except I don't have two months to wait around, so I simply froze the guns each in its own container: a one-gallon ziplock freezer bag. The filling method was simple: fill a sink with water. Dunk gun and bag under the surface. Fluff bag up as large as possible with gun inside, and seal. Once frozen, I then bashed the blocks with a ball peen hammer to get the guns out. I fired the obligatory 100 rounds through each. To no great surprise, each of the guns worked just fine. As I mentioned in my Glock book, I'd be more impressed by this test if the manner of extricating the guns from the blocks was to throw them down onto a parking lot surface, shattering the ice. However, as Glock hadn't done it, I felt no compunction to do so myself.



The Charles Daly about to be buried.

I ended up doing this test twice, adding the Kimber Warrior and Rock Island Armory pistols to the test. I didn't freeze the CQB and Charles Daly a second time.

What does this test replicate? (None of them really “proves” anything.) If you’re caught out in the snow or rain, and the soaked pistol then freezes as the weather changes, will it work properly once thawed? If you really want to know what cold-soaked guns do, ask the Finns. Here in the Great Lakes and Midwest, guns frozen by rain, ice or snow can be common. However, lacking a walk-in freezer to test, I couldn’t test them by freezing them with a coating of water on them. Based on later testing, however I have no doubt they’d pass under any conditions in which I could still be out in and shooting.

Test #2 Buried in soil

This test is simple: bury the gun, leave it, come back, dig it up and shoot it. The Glock test used five different types of soil. Here in Michigan we have two: sand/clay-silt mix, and topsoil. So, I buried them in each. The test procedure was simple: take the pistol, with a loaded magazine but empty chamber, toss it in the hole and shovel dirt on it. Dig it out with my bare hands, brush as much dirt off as I could with my bare hands, chamber a round and shoot. Repeat for the next magazine. Again, there were no surprises, as each shrugged off both kinds of dirt. I did take one measure to reduce abuse in the beginning, and place a small piece of tape over the muzzle of each. I have no doubt that dirt in the bore would score the bore, reducing accuracy at some time in the future. And also it would not be a problem in function. I just didn’t want to have to explain to Bill Wilson or Dwight Van Brunt of Kimber why their guns were so beaten up, and why I was sending each a check for a new barrel.



Into the bucket of death clean. It won't stay clean for long.

At least the first time I did the test. The second time, I didn't bother with the tape. Were I going into a positively grubby environment, I'd tape the muzzle. But for a test, where I'd have to have taped (again) muzzles 40 times, I just wasn't going to bother. If Bill or Dwight wants a new barrel, fine, I'll send each of them a check. But I can't see any decrease in accuracy so far. So the CQB and the Charles Daly got a second dose of burial in the topsoil, and the Warrior and Rock Island Armory got introduced to both kinds of Michigan soil.

Test #2A Dust like Mad

Unlike the Glock test, I went further with the soil tests. I took a shovelful of range dust and sand and dumped it in a 5-gallon plastic bucket. I then tossed in one of the guns, empty, with loaded magazine in place, and tape on the muzzle, closed the lid and shook it like a giant maraca. Which is a lot of work, by the way. After 15 seconds of shaking I took the gun out, chambered the first round, and shot the magazine. My plan had been to

shake for a full minute, but after the first 15 seconds, I dropped the time to a limit more reasonable. Reasonable to me, that is. Have you ever shaken a 5-gallon maraca? I had no intention of dropping over from a heart attack just to bring you more information. I also did not conduct the test with a round in the chamber. While bouncing around in the bucket the muzzle had to have been pointed at me many times. I don't feel like breaking one of the Big Four safety rules just in the name of science, and rattle a 1911 around in Condition One.

I then dropped the slide and hammer, inserted another loaded magazine, and repeated. Both test guns went through all the scheduled ammunition without a problem. The second time around, with the Warrior and RIA added to the mix, I didn't bother with tape. I just dropped them in and shook the pail. If you're ever thinking that you're in good shape, and don't need to visit the health club, try this test. Three guns, fifteen magazines each, shaking for fifteen seconds per. You'll find out just how much exercise you've skipped, and should not have. This test is work.



The CQB at the end of a “5-gallon maraca” run.



Health club? Who needs a health club? After shaking the 5-gallon bucket all day, I need a defibrillator.

Is anyone surprised that the guns all worked?

Test #2B New and Improved Dust

After hearing that the dust in Iraq was a lot finer than regular sand, I came prepared on the second test. I made my own “new and improved” dust by mixing a bottle of talcum powder and a cup of sugar into the bucket with our sandy range soil, and repeated the test. Let me tell you, the first couple of shots of a talcum powdered pistol are an adventure. Lots of dust in the air. I learned to try to stand with the gun downwind, so the dust wouldn’t blow back on me. Why sugar? It is gritty (something talcum powder isn’t) and it is easy to get. The mixture is a bit worse than regular sand, as the last few magazines were noticeably more difficult to hand-chamber a round than the first. Due to the hygroscopic nature of sugar, as soon as I finished this test I “cleaned” the guns in the range catch basin pond, and then got the water out using a Cylinder & Slide Dunk-Kit. For a portable and fast

cleaning method, the Dunk-Kit is great. It does leave a really slippery coating behind, and it smells like citric acid, but man does it clean.



More maraca work, this time with sugar and talcum powder added to the test.

Both the CQB and the Charles Daly crunched through Test #2B without a problem. When it came time to add the Kimber and Rock Island guns, I'd had enough. I wasn't going to subject the CQB and Charles Daly (and my chest, arms and shoulders) to another full set of exposures. I just did the second two guns, in the second series. They too crunched through the nasty mix without a problem.

Again, this isn't scientific, but is an affirmation that the first tests were not some singular occurrence. Properly-built 1911s grind through bad stuff and keep working.

Test#3 Mud

Oh boy. For this, I needed a face shield. One of our ranges has a catch basin pond/drainage area known as the “Rice Paddy.” I dug it years ago so that that particular range would be reasonably dry after a rain. The rain runs off the range and collects in the depression. As the water goes in, it brings silt from the range. Over the years various work crews cleaning at the club have burned things in there. We recently dredged it deeper to hold more water. I think we might have found Jimmy Hoffa’s resting place, as there is almost always a slick of something floating on top of the water. Oh, this was awful stuff. Michigan mud has many characteristics, depending on the water content. The Michigan mix of clay and sand when it is just past wet can be a super-slick surface that you’ll slip and slide on. (With just barely enough water, the underlying strata stays firm. Oh joy.) Add more water and it becomes this incredibly gooey stuff that collects on your shoes or boots until your feet are each encased in a coating the size of a rugby ball. Add even more water and the mud becomes a bottomless pit that will suck anything down, including vehicles. Maybe elsewhere mud is this evil, but I haven’t found a place yet. I was looking for mud in that nasty range condition we all experience where the mud is just thin enough to be slippery, but thick and gooey enough to suck your shoes off if you aren’t careful. It didn’t help that something must have died in the patch of mud that I first picked, and when the water got stirred up the resulting smell was like something the cast of CSI would talk cheerily about.



Me, shoving the Charles Daly, secured to the end of the barge pole, around in the mud.



The Charles Daly before going underwater.

The Charles Daly was up first. I used gaffer's tape to secure it to a pole, and pushed the pole around with the Charles Daly on it like I was pushing a

barge around a Louisiana swamp.

When I pulled it out, there were leaves of some kind of swamp grass on it, along with mud. I removed the CD from the pole, and swished the gun around in the water to get the bigger globs of mud off. After all, if you notice that your sidearm is crusted with mud, you'd think to do at least a minimal amount of cleaning, right? As I swished the gun, I made a note to use an extra dollop of the antibacterial hand soap in the clubhouse when I scrubbed up.



The Charles Daly once I stripped the gaffers tape off.



Up out of the water, and I have to pry the Charles Daly off the pole. (I don't get paid enough for this.)



Yes, that's me, stomping a very expensive 1911 into the gritty mud.



I tried shooting the CQB once in this condition. After being splattered by the mud, I then rinsed it after each mud-bath.

Note for future tests, and for those wishing to ignore my advice at the beginning and duplicate this test: get a faceshield with sideguards. You'd be surprised how much gunk ends up on the side of your head.

I pulled the Charles Daly out of the water, chambered a round (I had a loaded magazine in place) and touched off the first shot. The gaffer's tape disappeared, and with a clang the popper fell. Success! Finish the mag, re-tape the muzzle, and re-apply mud. Ninety rounds later the Charles Daly had passed. I needed a shower.

Next up was the Wilson CQB. Rather than go through the pole thing again, I just found a section of the rice paddy where I could walk down, dropped the CQB in the edge of the water, and stepped on it. I kept stepping until it had disappeared under the mud. I pulled it out, turned it over, and

repeated the process. I left it there while I did some scrubbing, visited the men's room, and got a cold soda from the clubhouse. Once back at the rice paddy I pulled the CQB out, swished it around, chambered a round, and repeated the firing test I had just completed with the Charles Daly. Repeat (without the clubhouse trip) for each magazine. For the same end result: all 100 rounds worked as expected. No failures.



The Kimber Warrior under the mud. Yes, those are very attractive grips disappearing under the slime.



Out of the mud, slightly rinsed, and ready to fire.

For the follow-up with the Kimber Warrior and the RIA, I took a slightly different tack. I dug a hole in the bank and used the shovel to pour water in. I dropped each of the pistols in, in turn. I then shoveled more water and mud on top. I then poured water to wash the mud off. The now mostly “clean” pistol was ready for shooting: I swished the rest of the mud off, chambered a round, and fired. Repeat for each magazine. No failures, although I did have to work a little harder a couple of times to get the slide back. Some particular bit of grit was getting caught someplace, and making me work for my knowledge. Mark that down, that swirling muddy water seems a bit more difficult on the gun than simply bathing in mud.

What good is this test? Well, if you happen to be in the Louisiana swamp I mentioned before (or a Michigan clone) and fall into the mud, it is nice to know if your handgun will work. These two certainly will.

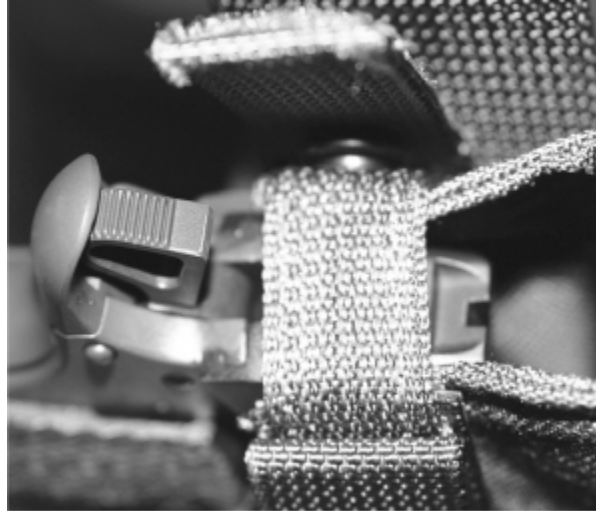
Lacking a beach (and not being on the Sheriff's Department Power Squadron, which I could have wangled a few years ago) I can't do this as a test wading ashore. However, the “shoveled silt” test is pretty close, and will have to do until I can arrange for both a beach and range.

Extra Test #3A

The use of the gaffer's tape got me to thinking: what if we add extra insurance with tape? For those who don't know, gaffer's tape is a duct tape-like-tape, with a difference: it leaves no residue. At least not most of the time. There are a few things it will leave residue on. (Like some silks. Don't ask how I know.) But mostly when you lift gaffer's tape it comes clean. Photographers use it to secure things. I've used it to hold up backdrops. I've known fashion photographers who used it on a model's back to get the clothes to drape "just right" while they photographed the model's front. I used it to seal the muzzle of the test guns in the dirt and mud tests. Could we seal everything? I tried covering the ejection port completely, to no avail. By the time I had enough tape on, and sealed well enough to entirely keep out crud, the brass couldn't escape. Unlike the muzzle, the ejection port has no extra "oomph" to tear off the tape. The best I could manage was a small strip along the bottom of the ejection port, to keep mud and dirt out. The bottom of the ejection port exposes access to the lower lug area. I could not tape the hammer area without binding the hammer and preventing firing. However, there is another method:



The ejection port gap allows a lot of mud and dust into the action.



The thumb strap keeps the 1911 in the holster, but doesn't close the gap against dust or mud.

If you use a holster with a thumbstrap, you're in. Once the strap is locked against the back of the slide, apply a piece of tape across the strap, sealing the gaps between strap and slide. With a taped muzzle, tape on the ejection port, and a taped thumbstrap, you can greatly reduce the amount of dust, dirt or mud that gets into your 1911. Just be sure that the majority of the "sticky" of the gaffers tape is on the thumbstrap. That way, when you draw, the tape stays on the strap, and doesn't come with the gun when you draw.

Firing a 1911 with tape on it is an anticlimactic experience. The muzzle tape disappears down-range. The ejection port tape usually sticks to the slide, at least somewhere. The thumbstrap tape stays on the holster.



Gaffers tape covers the gap and still lets the 1911 cycle. Don't use duct tape or 100-mph tape, it might stick too well.



Carefully taping the gap prevents mud and dust entry, while still allowing a clean draw.



A plastic freezer bag completely excludes dust.



Once sealed and holstered, you can gather up the excess with more gaffers tape. The bag will blow away from the muzzle on firing.

Extra Test #3B

I came up with this test after reading about the experiences of some Marines in Iraq. In order to keep their Beretta M9s dust-free, they cleaned them, then sealed them in Ziploc freezer bags. They removed as much air as possible before sealing the bag, then stuffed their M-9s into their holsters. If they needed them, they could draw, tear off the bag, and get to work. Yes, the tearing part added an extra step, but at least they'd have a clean and working sidearm.

Why bother tearing? I shredded a box of freezer bags in the name of science. The problems are small, but many. First, you have to get the air out before you can holster. If you leave any air in at all, the resulting bag is too large to fit into the holster. Ever try to suck the air out of a plastic bag

holding a loaded pistol? You do not want the sealing edge at the muzzle. Once you get the thing sealed, then you have to make absolutely sure you keep the safety on until you get it holstered. On the draw, getting the safety off and the trigger pulled takes some practice. The first few bags I tested, I had to ask myself “Is this worth it?” but by the time I’d gone through the box, I was pretty adept at it. Do not worry about the bag interfering with the function of the pistol. Once you press the trigger (seeing the sights is an additional problem) the bag is going to be shredded by the muzzle blast and the slide cycling. The bag, being square, will have a bunch of excess plastic. Wrap that around the bottom of the grips and use a rubber band or more gaffers tape (or even duct tape, since the residue won’t matter) to keep the excess under control.

As a means of keeping really nasty, ubiquitous flying dust out of a handgun (truck convoy in a sandy/dusty area, anyone?) the freezer bag approach shows a lot of promise. However, what I heard from those in “the sandbox” was that Higher Authority did not approve, so they had to stop using the bags. I suppose letting those out in the field make the choice between; a bagged, clean sidearm that will work, and trying to keep an unbagged sidearm clean enough to work was too much like rocket science. Those sitting in air-conditioned comfort knew better. In fairness, from what I’ve heard, there is a whole lot less of the “rear-echelon air-conditioned chairborne commando” syndrome in this conflict than in the earlier one the media loves to compare things to. But still, you’d think letting the guys in the field make the call on this one would be easy.

Unlike the tape tests, the freezer bag tests can be quite dramatic. Sometimes pieces of freezer bag will shred out around the muzzle, creating momentary plastic confetti.

Test #4

Submerged in water. Glock left theirs in water for an hour, then pulled it out and fired it. I figured I’d already done that test, what with cleaning the mud off the pistols in the earlier test. But I did it anyway. I dumped out the dirt and filled that same five-gallon bucket with water, then dunked each in turn. I did not have the time to do a full hour for each ten-shot magazine, so

I left it in for a minute, then pulled it out and shot it. Both passed with flying colors. I even stopped waiting for the barrel to drain before firing. By the time I was halfway through the first gun, I didn't even bother dunking them with the chamber empty. I simply inserted a loaded magazine, chambered a round, put the safety on and carefully set the gun in the bottom of the bucket. At the end of the minute, I pulled it out, aimed and fired.

In the course of adding the extra pair, all four guns passed with flying colors and water.

So, you fall off your boat, or have to wade a stream, and your handgun gets wet. Does anyone seriously think their handgun won't work? The bigger problem is water. Military ammunition specifications call for extensive measures to waterproof primers and case mouths. Non mil-spec ammo rarely has such measures. However, to get wet power or primers in unsealed but factory ammo, we're talking about days of immersion. You aren't going to get dud factory ammo from just a spill into the lake, river or bayou.



At least the water tests washed most of the mud off and out of the mechanism.



And the CQB pressed flush into the surface of the clubs' parking lot.



The Wilson CQB going under the truck.

Test #5

No lubrication. Well, the guns needed a cleaning at this point anyway. After a trip through the Dunk-Kit I stripped them and dropped the parts into a cleaning tray filled with rubbing alcohol. I scrubbed off the remaining powder residue, oil, dirt and mud, and left them in the sun to dry. I sacrificed a bit of my remaining stash of 1,1,1 Trichlorethane to remove all traces of anything not gun or finish. I put them back together, and left them in the sun while I loaded magazines. I then shot 100 rounds through each as fast as I could load, aim and shoot. (Hey, I can get some practice, too. Of course I'm aiming.) When I was done (that is, when the ammo was gone) all four had worked flawlessly and were each in turn too hot to touch

anything except the grips and trigger. For the last couple of magazines, just getting the slide stop down without getting burned was an adventure.



The Charles Daly flush with the parking lot surface. No big deal, it still works and the grips aren't even cracked.

Once they were cool enough to handle I pulled the slides off and applied oil where needed. I then picked up the brass before proceeding to the last test.

Test #6

I don't drive the heaviest truck around. I drive a Ford Ranger. But for this range trip I had a total of 32 handguns, four rifles, chronograph, collapsible table, 4,800 rounds of ammo, camera bag, standard poodle and our lunches with me. Probably in excess of the basic load limit of a Ranger, but mine has a beefed-up suspension. With me in it, probably a gross weight of over 4,000 pounds. I dropped the CQB and the Charles Daly onto the parking lot of my gun club and parked the front of my truck on them. I ended up running over them about four times before I finally got the tires

stopped right on them. Our parking lot is an old gravel-stabilized field that has gotten so many weeds and grass growing that we have to mow it. It isn't a lawn, but it isn't paved, either.

Parking a truck on them leaves a 1911-sized and contoured impression in the ground. The guns not only survived, but they were fine. The grips weren't even cracked. I drove back down to the range, loaded magazines and finished off the last of the test ammo. Then I picked up brass again. For the later test I drove over the Warrior and the RIA. By this time I was getting a lot better at this parking on guns thing, and hit the right spot to park on them each the first time. This test also left 1911-sized and shaped dents in the ground, and they both worked just fine when test-fired.

What do these tests prove? Not a whole lot. They do prove that these four 1911s can stand up to the kind of abuse you might expect a soldier or police officer to have to deal with in a day's work; dust, dirt, mud, rain, the impacts of a struggle, all are things a 1911 can shrug off. As for the legendary tests that Glock pistols have survived, I can't see tossing a 1911 into a running cement mixer (sans cement) and waiting to see what comes out. I wouldn't survive, so why should I expect my sidearm to?

Underwater

Will a 1911 fire underwater? Of course. Well, probably. The theoretical difficulties are threefold: hammer fall, bullet weight, and drag.

First, if you have a 1911 with a competition trigger pull, it may not fire. If the mainspring has been clipped, or swapped for one lighter, the hammer may not have enough velocity to set off the primer. Especially as the firing pin is also wading through a firing pin tunnel filled with water. A full-power main-springed 1911 can be expected to fire the first time you pull the trigger. Sometimes you might have to cock the hammer and try again, but I never did. Lightened hammers are a problem, too. The extra mass of a good old steel spur hammer would help it in overcoming the drag water creates.



At 3 feet underwater, a .45 230 hardball round will perforate a 1-inch board.



You can keep water out for a while with tape on the muzzle. But it will eventually get in.

Second we have bullet weight. As in, the water in the barrel acts as a bullet, which must be pushed out of the bore, and does two things: it creates greater pressure, and it slows the muzzle velocity of the actual bullet. How much does the water weigh? If we do a quick calculation, you'll be amazed. A government model will have about 4 inches of bore ahead of the bullet. The bore is a nominal .450" across. That gives us a cylinder of .636 cubic inches. Factor in the density of water, and we get 143.5 grains. That doesn't seem right, water should be heavier. OK, let's go with Plan B. Take a barrel, stuff a round in to plug the chamber, and fill it with water. With a little running up and down the stairs to the faucet and back to the Dillon digital scale, and we get....150.1 grains. OK, trust the math. What it means is that when you do touch off the primer, you're launching what amounts to a 380-grain bullet. (However, the "bullet" of water starts at 150 grains and drops off as the real bullet moves down the bore. As the water in the bore spills out of the muzzle, there is less water the bullet must push. Calculating the effect of decreasing mass on work performed is exactly the sort of thing for which you take semesters of calculus.) The powder charge in the cartridge is appropriate for a 230-grain bullet. Result? Greatly increased pressure. The regular working pressure of a plain, old 230 ball round is on the order of 15-16,000PSI. The standard pressure ceiling is 17K. If the increase in bullet weight only doubles chamber pressure, we're running our underwater 1911 at nearly the pressure of a 9mm or .357 Magnum. We should expect to see flattened and even pierced or blown primers. And not be surprised at brass with bulged bases at the feed ramp. (Does it double? Or only go up by half? I don't know, and I'll bet there has not been any testing done in pressure labs.)



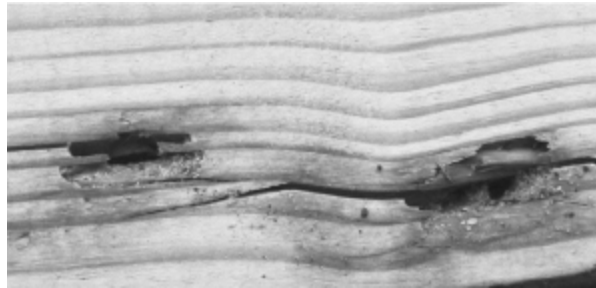
Lacking the use of a pool, I had to go back to the same muddy drainage pond to shoot 1911s underwater.

Third is drag. Once released from the muzzle, our already slowed bullet has to deal with the increased drag of water. Water, being roughly 80 times the weight of air, must be pushed aside. It is also viscous, the property of resisting movement. On top of everything else creating problems for us, water is an incompressible medium. That is, if you take a volume of water and put pressure on it, it doesn't squeeze down in size. Which makes it great for hydraulic systems, but lousy for pushing bullets through. So don't expect our underwater bullet to go far.

The calculations tell us to expect low velocities, little travel, flattened primers, and just thinking about it, the slide isn't going to cycle. The calculations also tell us what to avoid: Don't try this with a high-pressure cartridge. No 9mm, .38 Super, .40 or 10 mm. Don't do this with hollow-points. The water may cause premature expansion of the bullet, increased bore friction as a result, and even greater pressures. As a matter of fact, don't do this at all unless it is a dire emergency. Like, you're struggling in

water with a bad guy, and need to shoot him (or her, let's not be sexist about this) while the gun, you, he or everything is under water.

So, proceed to testing, to find out if what we expect is what we find. Lacking a pool whose owner would let me shoot, I had to go back to the rice paddy of the previous tests. Holding the test gun under water, parallel to the surface, I touched off a shot. I figured I'd start with the Charles Daly. I could at least wash a bit of the dried mud off of it. If things went well I'd risk the CQB. The result was definitely anticlimactic: When the hammer fell there was a "blorp", bubbles rising to the surface, and a swirl of mud. The empty was still in the chamber, with a really flattened primer in place. Could I find the bullet? Not a chance. I had brought a board with me, just in case. I had jammed the board into the mud 3 feet in front of the muzzle, and must have missed. No dent, no bullet, and the movement of the board must have been from the swirling mud and water.



A 2-inch rough-sawn pressure-treated board stops hardball at 3 feet of water.



The primers don't even look abused. All these were fired under water, and you can't tell it from the looks of the primers.



Here is the bullet, 1 inch into a 2-inch plank.

So far, so good. Now to continue. I loaded the Charles Daly with a round of Armscor 230 fmj. I aimed at the board 3 feet away underwater and pressed the trigger. Imagine my surprise to see the board topple. I pulled the Charles Daly up to find the slide locked back. What? I put the CD down

and fished around in the water until I found the brass. The primer looked fine. I pulled the board out, to find a hole through it. The bullet had gone 3 feet and had enough “oomph” to punch a hole through a 1-inch plank. I repeated the process, and ended up producing another hole. However, this time the empty produced the classic “smokestack” failure to eject. Well, 3 feet is plenty far enough in our “struggle in the water” scenario. So I proceeded to test the Charles Daly, Kimber Warrior, Rock Island and the Wilson CQB underwater, for more than a box of ammo’s worth of shooting. I used both the Armscor and the Black Hills, and found that half the time the slide would cycle and chamber the next round with the Charles Daly and the RIA. Half the time I got empties in the ejection port. The CQB and Kimber Warrior cycled a bit less often, but still occasionally ejected the empty case.



Cut out of the board, you could load this bullet and shoot it again.

Last, I crossed my fingers and tried the dreaded hollowpoints: you know, the ones that will expand in the bore and blow up your gun. Well, there may be something to that. I couldn’t locate any fired rounds, but I can tell you this: if you fire enough hollowpoints under water, you’ll eventually

bulge the barrel. Depending on where the bulge occurs, it may not keep the pistol from working. But it isn't what I would do again, not unless I was in the water with a bad guy and had no other choice.

And under no circumstances am I going to duplicate these tests with 9mm, .40 or 10 mm ammunition. At least not until I can figure a way to remote fire, and use high-speed video photography to record the blow-up that is certain to happen.

I was discussing these tests with a club member, when he asked me "Didn't the Army go through all this when they adopted the Beretta? Didn't the 1911 fail?" Hmm. I recalled that there was a lot of testing, but not the particulars, so I dragged out my old files and looked up the tests. The Joint Services Small Arms Program was tasked with finding a replacement for the "worn out" 1911s in inventory. An apparently rapidly dwindling inventory. So they tested a number of replacements, including Sig, Colt, Star and the Beretta. Based on tests of accuracy, endurance and abuse, the Beretta won. And was immediately enveloped in a swirling firestorm of controversy. How could the Beretta have won? How could the 1911 have failed? As for the failure, to a certain extent the fix was in. The new sidearm was going to be a 9mm, was going to be a high-capacity pistol, and was going to have a double-action trigger. The 1911 could have done the equivalent of walking on water, and it was still not going to be any of those things. As for the Beretta winning, there were many at the time who felt the fix was in on that, too.

If the JSSAP testing was so thorough, how is it we have Beretta M-9s failing in Iraq? The JSSAP testing was detailed but not thorough. Just because you dunk a bunch of guns into a scientifically specified bucket of mud, doesn't mean you are thorough. Nor is dunking some others into a non-scientifically specified mud puddle at the gun club. To be thorough, you'd buy a test batch of all the sample guns. Say 1,000 each. Then you'd issue them for use in the field, and keep track of how they held up after five or 10 years of use. Once you had a real baseline, you'd buy the winner, with improvements that actual testing had brought about. Does anyone see this actually happening? Not a chance.

All my testing has "proven," if it has proven anything, is that modern 1911s, of current construction, are a lot more durable than many would

believe. Should the armed forces go back to the 1911? There are those in uniform who would like very much for that to happen. However, we've got a lot of M-9s in inventory, and the 1911 does have an image as an "unsafe gun" to overcome. We'll overlook for the moment that all firearms are inherently unsafe (they shoot bullets, after all) and that true safety is a matter of training. If you allow poor or insufficient training, it won't matter what handguns you issue, someone will manage to shoot himself or someone else inadvertently. Poorly trained troops issued sharp sticks are going to hurt themselves. And only an idiot blames the stick.

Drop Test

Covered in Chapter 12, the Trigger pull section. The summary: not something to worry about unless you simply don't have enough in your life to worry about and need something.

Extractor Tests

We all know you should not drop the slide on a round already in the chamber. That is, instead of inserting a loaded magazine and cycling the slide to chamber a round, you lock the slide back, drop a round directly into the chamber, and drop the slide. Doing so is bad for the extractor. Or so we've been told. My friend Ned Christiansen is a brilliant machinist and an artist in gunsmithing. He thought about this problem for a while, and came up with a test. In typical Ned fashion, the test involves a holding fixture for his test rig, and a stressor fixture to apply the test. It also involves precise measurements of the tested part. First he took a scrap old slide and slit it down the middle. Using the slide half as a holding rig, he could measure extractor flexion. He arranged a way to put pressure on the extractor, to measure deflection under a load. X number of pounds moves the extractor Y thousandths of an inch.



After 30,000 rounds, 60,000 “bubba” loads, the CQB gets 500 rounds of Wolf. No big deal, all in a day’s work.

Then he machined a shaft to fit in his mill. The shaft has a stub on it that duplicates the contour of a case rim. When the shaft rotates, the stub strikes the extractor and flexes the extractor exactly as it would, were the extractor snapping over a rim, closing on a chambered round. Neat, eh?

Then he took a tested and known extractor, put it in the test rig, and turned on his mill. Fifteen minutes, at 750 rpm gets you 12,000 (that’s twelve thousand) impacts. He then tested the extractor for flexion, and inspected it with a high-powered magnifier. No change. That’s right, the extractor did not show any diminution of its strength after this abuse, nor did its appearance change. So at least top-quality extractors are a lot tougher than the armchair experts would have you believe.

I added on to Ned’s experiment. I sent him a Wilson bulletproof extractor; one that already had some mileage on it. (The extractor from the same, abused CQB you’ve read about for two books now.) He tested it for flexion. On his rig, it took 7 pounds to move the extractor tip 20 thousandths of an inch. He then added a lot more mileage with his mill-mount extractor abuser. To the tune of a solid hour at 1,000 rpm. That’s

right, 60,000 “Bubba” loads. He measured flexion again. Seven pounds moved the extractor tip (drumroll please) twenty thousandths. No change. I then installed the extractor back in the same Wilson CQB we’ve been flogging through both books now and fed it a case of Wolf steel-cased ammo. All the experts will tell you that steel-cased ammo is bad for your extractor. Well, we’ve taken a good one and seriously aged it. Then put the steel-cased ammo through it, and tested it again.

Would you be surprised to know that the extractor was not the least bit put out by our efforts? Yes, it has gobbled tens of thousands of rounds, been subjected to the mud, dust and dirt tests, had the equivalent of 60,000 “slams” on a chambered round, and then 500 steel-cased Wolf rounds through it. And it is still working like a champ. (I really should ask Bill what he wants for this firearm. It is too good of a 1911 to let it escape.)

The test doesn’t address the other things that are bad for the gun when you crash the slide down: the bottom lugs take a heavy hit, the trigger can bounce back and forth in its slot and possibly tap the sear. It is hard on the gun. But the extractor, the part we’ve been worrying about all this time, seems to be less effected by it than other parts. Go figure.

Internal Extractors

One thing came to me while writing the second book: we’re re-inventing something John Moses Browning had already worked on. His earliest pistols, the pocket guns, the 1900 .38, the 1905, all had external extractors. Then for the 1911, he went with an internal extractor. Think about that. He must have thought one of two things: the internal was better for some reason, or the internal was just as good and didn’t have some drawback that the external extractors had. He changed the M-1900s from two links to one. He changed them from integral ramps to separate barrel and frame ramps. And he changed from external to internal extractors. All in the space of 10 years or so, as he evolved the designs of his pistols.

Some things we need, for some reasons. We went with fully ramped barrels to support the cases with the higher pressures of .38 Super making Major. We did not go back to two-link barrels. Why the rush for external extractors?

Testing you and your 1911

Just what do you need to test, and how to go about it? The basic testing of reliability is easy enough: a supply of good ammo, good magazines, and a range on which to shoot. Since you're going to be running ammo downrange anyway, you might as well get some practice at shooting, too. In the arms factories there is no time for having fun. The various handgun manufacturers I've been to all do a variation on a theme: pistols are fired for cycling for three or so magazines, as quickly as the testers can sling bullets downrange. Basically, it means holding the handgun in one hand while slapping the trigger finger of the other hand back and forth in the trigger guard. You can shoot a lot of ammo very quickly that way. You, however, are not on a schedule. (And you're paying for the ammo, one way or another.) So you can get better at shooting while you test. There are some tests you can use to improve your skill, while also running a new gun through its paces.

Some manufacturers do more. When I was at the Sako plant, I traveled through the test-fire rooms. First came the proof-firing, where each rifle was subjected to three over-pressure rounds. Then each rack went to the accuracy testing room. There, practiced and skilled shooters were firing the rifles at targets, while sensors fed the bullet paths to a computer that plotted the groups. If a rifle didn't shoot accurately enough, it got sent back for a rebuild. Many handgun manufacturers follow "tracked" testing. In a tracked test, instead of each and every handgun being accuracy tested, a random handgun is tested for accuracy. If it fails, then the reason for failure is tracked down, and the other handguns subjected to that change are hunted down, inspected and corrected. Rifle shooters expect rifles to shoot tight groups. Apparently many handgun shooters do not, and tracked testing is good enough. The smart manufacturers know that accuracy is in the machining, and they control tolerances tightly enough that accuracy does not slip enough to be a problem.

Who is Ned Christiansen?

No, not a character in an Ayn Rand novel. He started out as a mold maker in the plastics industry. As with so many who ended up in

gunsmithing, he saw what was being done in the early days and figured he could do as well or better. So he did. And does. He was a hardcore bowling pin shooter, a Dual Master Blaster, a group of competitors that had perhaps two dozen shooters at the end of Second Chance's run. He won several events outright, and was always taking home loot from placing well in a bunch of categories. He builds guns that are art. No, he builds guns that are Art. He knows guns and how to shoot them. And except for his web page he doesn't advertise.

Unless someone has whispered his name to you, you probably haven't heard of him. Am I telling you his name to drum up business? Hardly. Even without a slick brochure he has a five-year waiting list for full-house custom guns. Less (somewhat) for simpler jobs. I'm running the risk of embarrassing him and losing my place in line. Actually, I wouldn't, for Ned is also a real nice guy who would not take such measures. Do something stupid and he'll send back your deposit and tell you he won't work on your guns, ever. But bump you back in line? He's not that petty.

Oh, and he builds just about everything. He's done the slickest rifles and shotguns I've seen. I first met him at the shotgun slug event at Second Chance, where he was using a Winchester 1897 with an extended magazine tube. Yes, he built the tube. Yes, he won loot with that gun, against guys who were shooting 1100s.

If you can stand the wait, and pay the freight, you won't regret the gun you get.

That's who Ned is.

The first thing to do is thoroughly clean and inspect your new prize. All the manufacturers do their best, but anything made by man is subject to occasional errors. I've seen firearms assembled with the wrong parts. I've seen firearms where some part obviously missed a step in manufacturing. Like a handgun shipped with an unrifled barrel. Someone obviously picked it up partway through the barrel-making process, and didn't put it down exactly where they picked it up. (How it slipped past inspectors after that, I don't know.) Technically it is a curiosity. Unfortunately it is also a federal felony to have a smooth-bore handgun (it meets the definition of a sawed-off shotgun) so it had to go back pronto. I've seen firearms mis-marked as

to their caliber. You want to make sure everything is correct before you get to the range. Reassemble exactly as it was. Do not introduce any new parts yet.

Basic testing involves putting about 200 rounds through your 1911. Along with your 1911, ammo and magazines you should have a basic toolkit and cleaning kit along. That way if you run into minor problems like loosening grip screws you can tighten them. You do not want to clean until you've finished the basic 200. The things to watch for are simple: do the empties all get out? Do they fall into an area that is reasonably the same? Does it lock open when empty? Do the bullets hit where you are aiming?

Basic Testing Procedure

Load all your test magazines with two rounds each. If there is going to be a trigger problem, you don't want to find out with a full magazine. If you've ever had a handgun go full-auto on you (I have) you don't want that to happen again. Fire each two-round magazine over a rest for accuracy and zero. If you only have three or four magazines, repeat it for 20 to 30 rounds. If you have a bushel basket full of magazines, you don't need to do them all. Do 10 or so. If you haven't had a problem by then, chances are your magazines are up to snuff.

Now is the time to determine if the sights are zeroed, and if accuracy is good enough. If you find that accuracy is lacking, you have a few choices: you can ignore it. Plenty of people shoot handguns that aren't tack-drivers, and never feel slighted. As I showed in Volume 1, even "beater" guns that are casually accurate can keep all their shots in the "A" zone of a USPSA target at 50 yards. The IDPA target has an even bigger A zone. If you can't or won't ignore it, you can have a better shooter test accuracy. If a bull's-eye Master or an IPSC master can't get tight groups, then you might need to tend to things. Try different ammo. Try a Ransom rest. Maybe your 1911 is ammo sensitive. Maybe the trigger is so "crunchy" than none of you can shoot tight groups until that aspect is tended to. If your 1911 is reliable throughout all the accuracy testing, then you can afford to be deliberate about it. If, however, it is also unreliable, it should go back to the factory or

the gunsmith from whom it came. Include targets and all the details about distance, ammo, who was shooting, etc.

If the 1911 doesn't lock open on all the mags, find out why. Is it the magazines? Is it the recoil buffer you installed? (Didn't I tell you not to make any changes?) Find magazines that work, or ship it back. If you're using brand new magazines from a name maker, the gun should work correctly. If you're using "el-cheapo" magazines from the local gun show, I wouldn't be too quick to blame the gun.

Once you have determined that the trigger isn't going to run away on you, that the gun hits to the sights, and that the magazines work, load them up. You have a few tests to run, drills to practice, and brass to pick up.

Some of these drills you will not be able to do on some ranges. There are gun clubs and ranges that do not allow you to work from the holster. Some don't allow "rapid fire" which is usually defined as faster than one shot per second. If you shoot faster than what the observer thinks is one shot per second you'll be admonished, even if your shot timer shows you weren't even close. All I can suggest is that you find a place to shoot that treats reasonable people as such, and not as if everyone present pegs the ineptizoid scale.



If you want to test your new 1911 alone, that's fine. But friends can help, and they can also see things you can't. Here a couple of my test-fire assistants get ready to put ammo downrange.

The Bill Drill

Invented by Bill Wilson, it tests some IPSC basics. You need a USPSA/IPSC target at 7 yards. You should start holstered if you plan to compete or carry. If you aren't comfortable working from the holster yet, you can start at low ready. Use an electronic timer to check your times. Set the timer to random start, and begin on the beep. On the beep, draw (or lift from low ready) and fire six shots. You want to fire six A hits. If you throw a shot out into the "C" zone, you failed the drill. Note and record your time. The goal you want to reach is to draw and fire six A hits in two seconds flat. Do not try to make your drills by setting the timer to two seconds and attempting to sling six shots into the target in time.



One thing to check right away, is do the shots hit “to the sights?” If they do, good. If not, is it you, the 1911, or the ammo? Best to find out before the match.



They’re all going to kick. You practice drills to learn how to shoot accurately anyway.

The Bill Drill is for watching your sights and building speed, not just building speed. With a bit of practice, you should be able to get six A hits without sight alignment being such a hassle. Then pick up speed. Those starting from low ready will make the two second mark a lot sooner, as you pick up at least half a second, not needing to draw.

Once you can make the time limit with your hits, add complexity. Do barricade Bill Drills, firing around either side of the barricade. Do 10-yard Bill Drills. Do Bill Drills starting outside of the shooting box, and stepping in as you draw on the buzzer.

Enos Drill

A product of the fertile mind of Brian Enos, one of the top shooters of the 1980s and early 1990s. He and Robbie Leatham practiced and competed together, and the two of them developed many of the hallmarks of USPSA/IPSC competition. The Enos Drill is deceptive, and to the outside observer you aren't doing anything but blasting ammo. It is the Bill Drill without a target. You shoot your six shots into the (close range) backstop with nothing but speed as your objective. No draw. Start from low ready if you want, or start with the 1911 already raised. Blast six shots into the hill as fast as your trigger finger can work. Watch the sights. Watch the sights as they lift under recoil, where they go, how long they take going up and down, and where they are when you shoot each shot.

Just what the heck are you doing? Lots. You can only shoot as fast as you can see. Well, only as fast, accurately. If you're just pulling the trigger you're trusting to luck. By pushing one aspect of your performance beyond your usual limits you can learn to see faster. You want to focus on the front sight, where it is going, what it is doing, and how to manage it. Not control it, manage it. Under recoil the sight is going to come up. You can learn to get it back to the rear notch quicker, with practice. Also, you learn to work your trigger finger faster. Competition shooters talk of "splits." The time between shots. A shooter who cannot work his trigger finger faster than .20 seconds between shots simply cannot shoot as fast as a shooter who can do .15 second splits. Now you may be thinking "He's talking about .05 seconds per shot, on a 32-round field course. With running and props to maneuver around. He's focused on the wrong thing. Not the wrong thing, but the climactic thing. If you are faced with a swinging or moving target, a drop turner (a target that drops down, turns to face you, then drops and turns to face away from you) that "mere" .05 seconds per shot can mean the difference between an A hit and a D or miss.

The Enos drill is not something you should do all the time. But you should do it now and then, and record your split times, to keep track of how your practice is going. If despite all your practice you haven't improved split times, or you don't have a better idea/sight of what your front sight is doing, then you need coaching.

El Presidente

The classic IPSC drill. The layout is simple:

you have three targets, shoulder high, a yard apart. (some say they should be three yards apart, but that's like quibbling over attendance lists at the Council of Nicea) Start with your back to the targets. Turn and draw, place two hits on each target, reload, then place two hits each again.

In the old days, we'd struggle to post a "Par" time. That is, all A hits in 10 seconds. Twenty-five years ago, if you could do a Par El Prez on demand, you were a demi-god. Guns, holsters and shooters have gotten better since then. An aspiring IPSC competitor should be able to do a Par El Prez after a couple of months of regular practice. Why was the time generous? Partly because we were such casual shooters back then. Even with regular practice, we were learning. Now, you can benefit from that research, and start out at a technical level not even national champions were doing in 1980. Partly the time was generous due to the timing method: stopwatches. An error of a tenth of a second, in a 10-second run, is no big thing. The same error in a 5-second run becomes significant. Electronic shot-sensing timers allowed us to time accurately and reliably to a hundredth of a second. Shooters began pressing times downward in El Prez. Now, a top shooter, depending on what equipment Division he is in, can do a clean (or nearly so) El Prez somewhere between 3.5 and five seconds flat.

The El Presidente tests a good draw, smooth transitions, a clean reload, and follow-through. I've seen good shooters blow an El Prez from admiring their shots before they've finished.

Chapter 5

Penetration

Just how well do the various calibers of the 1911 penetrate? That depends on what you're trying to punch a bullet through. If we're talking ballistic gelatin, they all penetrate very well indeed. Ballistic gelatin commonly comes in 16-inch or 18-inch blocks. It isn't unusual to have a 9mm or .45 ACP hardball round go 30 inches deep or more in the gelatin. I've had .40 S&W 180-grain full metal jacketed bullets exit the back of a pair of blocks more times than I can count. Not that there is something mystical about how well the .40 penetrates. No, the truncated cone penetrates gelatin (and people) better than a round nose does. Load the same shape into a 9mm or a .45 and you'll increase their penetration, too.

When it comes to penetrating people, the various calibers of the 1911 are probably a little too good. My friend Jerry Miculek had the occasion to teach a group of Spec Ops personnel back from Iraq. In one incident, the trooper involved shot a bad guy while the team was doing a house-clearing. Our guy shot the insurgent at point-blank range with a 1911 loaded with 230-hardball. The bullet exited the bad guy, hit the concrete wall of the room and ricocheted, striking another Spec Op trooper in the leg. Breaking his leg. They were not the least bit surprised by the penetration (nor was I when Jerry told me of it) and apparently the unit conversation right afterwards revolved around "does this qualify for a Purple Heart?" (I'd say yes, but then I'd be a soft touch handing them out.) When the New York Police Department went to 9mm handguns (Glocks, but for this discussion a 9mm is a 9mm) they decided to issue full metal jacket ammunition. Rational discussion could not budge the administrative ranks from the idea that FMJ was "more humane" and that hollow-points and soft-points were something vicious, something evil, something racist even. (I guess that's what happens when you let people who don't know much about guns make such choices.) What happened was entirely predictable, and as inevitable as the tides: the FMJ bullets would regularly exit the bodies of the offenders

and suspects the NYPD officers were shooting. So often, that in the crowded environment of the free-fire zone of some New York locales, bystanders were being struck by bullets after the bullets had passed through the bad guys.



Bullet construction has a lot to do with penetration. The nickel-clad steel jacket on the right, and the Teflon-coated one on the left will penetrate a great deal of “stuff.” Neither is evil.



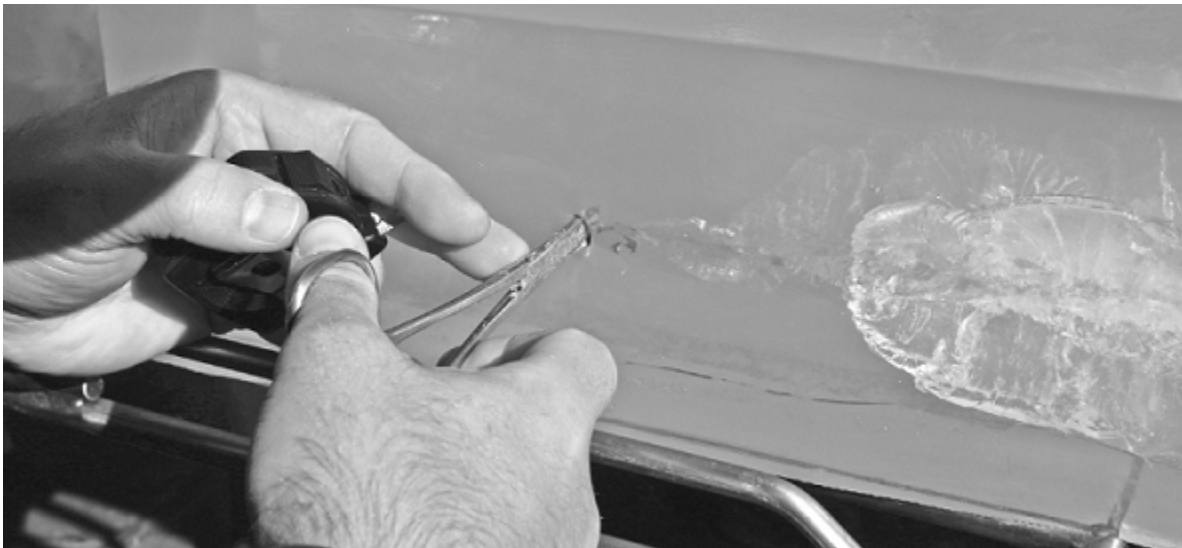
Overpenetration is not just a problem on people, but also on common objects. This simulated wall did little to stop handgun bullets.



If hollow-points are against the Hague Accords (not the Geneva Convention) then we have to implement other military usages; fire on sight, incarceration for the duration, etc. Hollow-points aren't evil, get over it.

You see, plain old round-nose 9mm and .45 have recorded perforating (in and out, instead of in to stay) wounds from 50 percent to 80 percent of the time. The truncated cone shape of the initial and common 180-grain bullet in the .40 penetrates even more, and would probably post even higher numbers.

So, in due time the powers that be in NYPD came to the conclusion that they really needed to go with hollow-points. In talking with my friend Massad Ayoob, who apparently has many sources of information, the number of instances where bystanders had been struck was 17. Someone at NYPD could do the math, and even though none of the shootings had resulted in the fatality of a bystander, it was only a matter of time before a bystander was struck and killed by an exiting NYPD-mandated FMJ bullet. Many people think it was the Amadiou Diallo shooting that caused NYPD to change. He was struck 41 times by 9mm bullets in a mistaken identity shooting. The department was already shifting officers over to hollow-points in their regular rotation through annual training and qualification, a prudent move. That way they could be sure that each officer's sidearm was reliable with the new JHP issue ammo and sighted-in. The officers involved in the Daillo shooting were scheduled for their annual qualification and changeover to hollow-points, but had not yet gone through it. They were still armed with FMJ ammo.



How much penetration is “enough” is the subject of much argument. Ballistic gelatin has the advantage of being repeatable, always a good thing in scientific research.

If you are planning to carry, do not carry FMJ unless departmental regulations, local law, or military regs require it. Carry hollow-points when legally allowed. If anyone asks you why, cite this chapter and the experience of NYPD. You’ll be on solid ground.

So, what do the various bullets penetrate?

Ballistic Gelatin

I’ve been to a few “jello soirees” where we shoot into large amounts of specially-prepared gelatin. Hardball (full metal jacket, usually round nosed) can be counted on to penetrate deeply into the stuff. The typical result is that a .45 stops at the 28- to 30-inch mark. 9mm, being a bit smaller, faster, and due to simple geometry, tougher-constructed, exits a two-block stack more often than not. .40 S&W, in the usual 180-grain truncated cone, almost never stays in the second block. Typically, it exits with vigor and makes a noticeable impact on the backstop.

As far as people are concerned they act the same. Through-and-through is the technical description of a perforating wound.

Change to hollow-points and things get very different. Except for the Cor-bon DPX, which are designed to keep penetrating after expanding, 9mm, .40 and .45 bullets expand vigorously and usually do not penetrate more than a single gelatin block, 16 or 18 inches. Some of the lighter 9mm bullets penetrate about a foot.

When it comes to selecting a “suitable” hollow-point bullet for self-defense, I will take a position that some might deem wimping-out: there are few bad bullets today. Evan Marshall and Ed Sanow did pioneering work in determining bullet effectiveness. I’ve met Ed a few times. Evan I know better. He ran the first IPSC match I ever shot, and gave me the honor of beating him. (That was not his intent.) Their method of determining bullet effectiveness was to tabulate the results of all the police shootings they could get their hands on. In order to get information, they had to promise in

many cases that the source would not become known. Anyone read “The Three Musketeers?” The King of France questions his wife about her knowledge on a particular matter. “How do I know it is true? Who is your source?” Her reply: “Sir, if I reveal my sources, they soon cease to be sources.”



A perfectly expanded bullet after penetrating over a foot in gelatin. Great performance, and not always achieved in the real world.



OK, this is a great bullet. But how useful is it to know how well it works when it is replaced in a few years? Keep current, but don't make

yourself crazy. There are few bad bullets today.



It takes a lot of gear, work and experience to do a ballistic test with proper scientific rigor.

Knowing the effectiveness of a particular bullet in a particular case is useful. But if the police department where it happened is embroiled in a lawsuit, they don't want information leaking out, even in the name of scientific inquiry.

Critics have pointed out that secret sources prevent other researchers from crunching the numbers and seeing if the results Ed and Evan are reporting are correct. As far as that goes, they are correct. Get over it. As

soon as anyone finds out where the info comes from, it stops coming. There is no way to have our cake and eat it, too, on this matter.

After publishing their books on the subject, Ed and Evan found themselves overtaken by the manufacturers. The bullets they report on, for the most part, don't exist any more. And so, if I were to tell you that from ballistic gelatin testing done in the summer of 2005 the Hornady XTP 200-grain .45 ACP load is very effective, penetrates 16 inches of gelatin and expands to nearly three-quarters of an inch, what good would that do you in the year 2009, when Hornady replaces it with a newer bullet?

The competing theory for bullet effectiveness is from Dr. Martin Fackler. He looks at bullet performance in ballistic gelatin. How far does it penetrate? How much does it expand? What does it do to the gelatin? Where the Marshall/Sanow information is real-world, messy and each unique, the Fackler method has the benefits of being repeatable, reportable, and duplicable. You can't shoot a deceased felon again to see if he'd react the same way to a different bullet. But you can shoot gelatin again and again to make sure bullets work the same way. That is, if two researchers, one on each coast, shoot the same bullets into gelatin (and follow the IWBA protocols) they will come up with the same answer. That is, they will find that "X" bullet penetrates "Y" distance in gelatin and expands to "Z" diameter. Which is better as a method? Neither. They both have their strengths and weaknesses. The best thing to do is combine the knowledge. If gelatin testing shows that two bullets work identically, but in real shootings (with a large enough database) one is markedly superior to the other, then we have to find out why. If two bullets are markedly different in gelatin but seems pretty much the same on the street, again, why?



You can do a lot worse than find out what your local PD carries on the street. This .45 GAP ammo is great practice ammo, but fmj on the street? I don't think so.

Bullet and ammunition manufacturers have the benefit of both approaches. They can do ballistic gelatin testing. They also get feedback from their law enforcement customers. At the very least, if they make a bullet that doesn't work they can count on decreasing sales and even returns of ineffective ammo.

One further difference between the camps is in penetration. The Sanow/Marshall advocates feel that bullet fragmentation, and decent penetration (more than, say, 6 or 7 inches) gets the job done best. Fackler, the IWBA and the FNI all feel more is better. As in, you need a foot at least. The FBI terminal ballistic protocols even go so far as to flunk a bullet that does not penetrate at least a foot of ballistic gelatin in any test. Which can be difficult having penetrated incidental barriers, leading to expanding bullets that penetrate to a far-the-well in bare gelatin.

With the intense interest in effective ammunition, no maker wants to be left in the dust. They all (at least the big, and known, names) make good bullets. You can do worse than query the local officer as to what brand they carry. Don't be surprised by one of two responses: "I don't know, whatever

they give me” or a long lecture about why what they carry is best, the testing that went into it, and who failed in their tests. Many police officers know little more about firearms than what they were taught at the academy. And some who seem knowledgeable are simply repeating what they learned in the last qual course ballistics update. I have no beef with police officers. They do a hard, dirty and dangerous job on our behalves. Just don’t take every word from every officer as gospel. Those who know are likely to be quite informative. You can do your own testing if you wish. One advantage to the “poll the police” method is that if you do find yourself in a self-defense shooting, and the question comes up as to why you were using hollow-points, you’ll have an answer: “It is the same brand and caliber carried by the police in my hometown department.” Of course, if you live in some place like New Jersey, where non-LEO ownership of hollow-points is verboten (at least for self-defense) then you’ll have to “settle” for hardball. Which leads us to some interesting experiments.



Go ahead, hide behind your AK mags. I don’t care, and neither does my 1911.



Here is the back of the AK mag after being whacked with 230 hardball.

Definitions

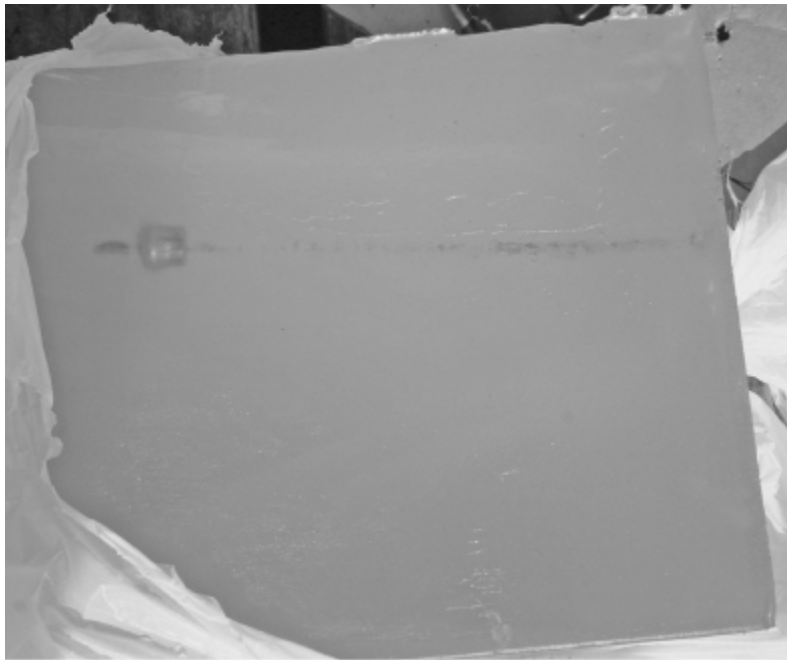
The basics are this: cover is what stops bullets, concealment is what stops sight. A thick hedge will conceal you, but not cover you. A lexan wall 3 inches thick will cover you but not conceal you. Cover may not be uniform. A brick wall is, but a frame house is not. The steel vent pipe coming up from the bathroom is bulletproof, but unless you know exactly where it is and can squeeze yourself behind its 6-inch width, it isn't much help. Just because someone can't see you doesn't mean a bullet launched in your direction cannot find you. Be clear about cover and concealment.

Impromptu body armor

If you've been paying attention to the news, you'll know there are people out there who don't like us. And often they carry the AK-47, as Gunny Highway put it "the preferred weapon of your enemy." The typical method of carrying spare ammunition is in a chest-mounted magazine pouch. AK magazines are typically made of steel. Much 7.62X39 ammunition is made with steel cartridge cases. How effective is that steel? I've heard some opine that it works as low-grade body armor. At one of the law enforcement rifle classes, Ned Christiansen and I were talking about it

when he said “I’ve got a magazine I’ll donate to the cause.” So we loaded up a magazine with 7.62X39 steel-cased ammo and plastered the magazine against a leftover block of ballistic gelatin. I loaded a round of Black Hills 230 FMJ into my Springfield Loaded Government Model, and proceeded to shoot the magazine.

Well whaddya know? Anyone who is depending on their AK mag to stop hardball is in for a surprise. The 230 FMJ punched through the magazine and the rounds it held, and pushing a disk of steel ahead of it, went 5 inches into the ballistic gelatin. I know, I know, the FBI has determined that anything that doesn’t penetrate a full 12 inches of gelatin is a complete and utter failure as a bullet. Pardon me for the rude noises. Anyone care to hold still while I poke a 5-inch deep hole through their sternum? Or between the ribs over their heart, lungs or liver? At the very least it is going to hurt, and applied repeatedly it is likely to hit something that matters, something closer than a foot from the front of their/your chest.



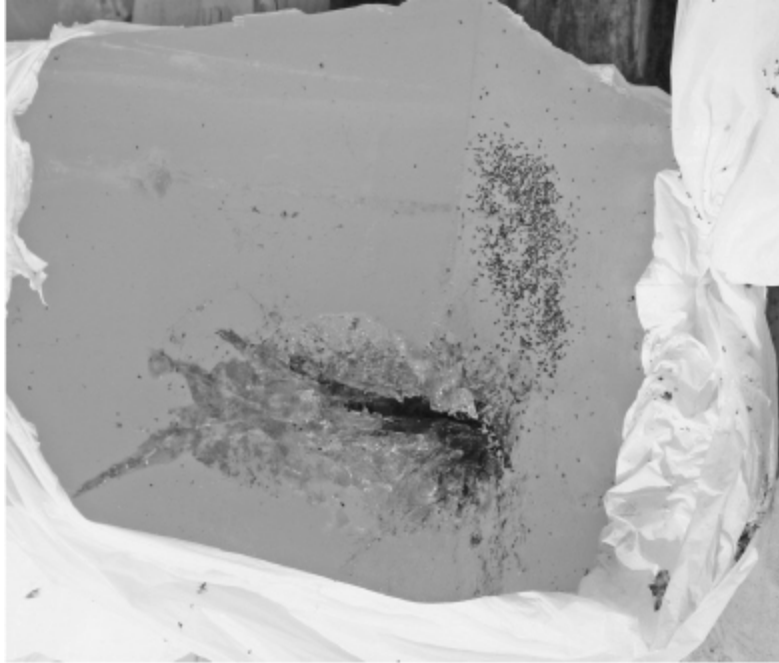
Over 5 inches of gelatin, with a small disk of steel punched ahead of it. Not bad for a .45, and its reputation of “not penetrating.”

So, if you find yourself in the position of having to shoot someone festooned with AK magazines, don’t bother trying to aim around them.

They'll go through. Just keep hammering away. Just out of curiosity, we tried the same magazine (It looked pretty sad with only one .45 hit) with a round of XM-193 5.56 ammo. The 55-grain fmj bullet blasted the magazine pretty fiercely. It even ignited loose powder, causing a momentary flame and some smoke. However the gelatin behind was not penetrated as much. The small fragments that made it through only went a few inches. I can't imagine it would be much fun, especially with the loose powder in the magazine going up in flames and smoke. All I can say for those who have such a job is this: repeat as necessary.

Buildings

In teaching law enforcement rifle classes, one objection we run into time and again (less so of late, I think we're winning) is that police can't use rifles; they penetrate too much. The counter-intuitive truth is that they penetrate less. There have been a number of tests, some public, some not. I know that the staff at Gunsite tested. I know that the police department of Joliet, Illinois tested. The Michigan State Police tested. And I've tested. We all have found pretty much the same thing, with minor variations: handguns shoot through buildings. As an example, I set up a series of wallboard. Called gypsum, drywall, sheetrock and who knows what else, it is pretty much the same stuff: a layer of plaster sandwiched between and bonded to, sheets of thick paper. If your house has been made since 1946, it is made of this stuff. An interior wall is a frame of two by fours with the drywall nailed, stapled or screwed to the timbers. A good builder has more studs and thicker drywall. The best even add insulation for sound-proofing. The cheap ones use as few studs as the code allows. No one uses less than code-specified drywall, usually 5/8" thick. If they get cheap and the house creaks, customers can't complain. If they skimp on something mandated by the fire code they can be sued after a fire.



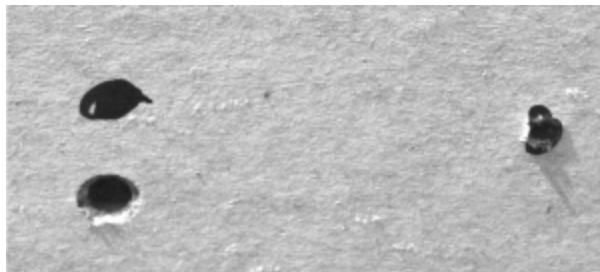
The fragments of the 5.56 through the magazine, into gelatin. Not fun, not pretty, but perhaps not as useful as the .45 would have been.



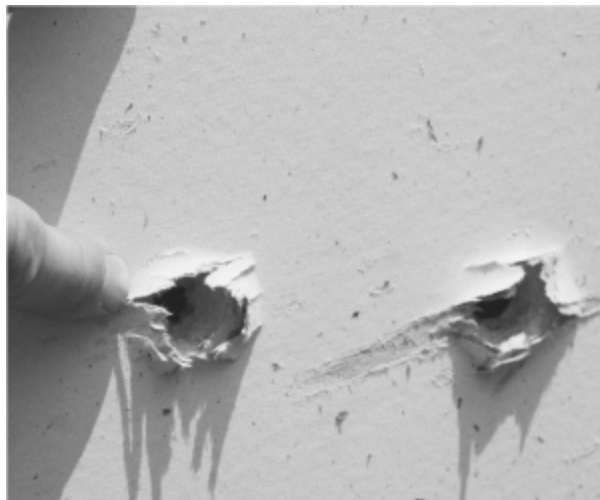
The drywall test walls.



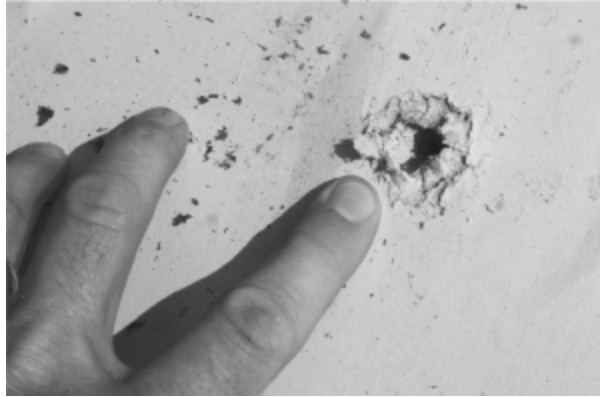
Drywall on either side, 2X4 supports, and dead air in between. Your standard indoor wall.



Drywall is no hindrance to bullet entry.



Here is the back of the first wall, which looks like the back of the second wall, and so on.



At the back of the fourth wall, bullets are still nose-forward and continuing into the backstop.

The method is simple: attach drywall sections (they come 4 feet by 8, its best to cut them to manageable size) to two by fours to make hollow boxes 4 inches deep, and shoot them. The results are predictable. A 9mm, .40 or .45 full metal jacket bullet will continue to travel through as much drywall as you can stand up. Four, six eight layers of drywall? No problem. Each pair is an interior wall, and another room. It is entirely possible for a bullet to traverse the length of a residential dwelling and exit. Unless it hits something solid like a pipe, it continues onward. A stud or an electrical box will slow it down, but not stop it.

Lest you think the dry, theoretical test on the range is too different from real life, I have Big Ed my friend the SWAT commander to the rescue. Apparently there was a neighborhood (and a bad one at that) in his area that was going to be leveled and new housing put up. His multi-jurisdictional SWAT team received permission (I imagine the various fire departments did too) to conduct training. The SWAT team had a merry time training, testing and experimenting. One of those experiments was shooting walls. The summary of his report was this: “Unless you are using hollow-points, or hit a pipe, the bullet doesn’t stop until it hits bricks.”

Which handgun caliber it is doesn’t matter much. Anything you’ll be using in a 1911 will penetrate. Your only avenue to diminish penetration is to use hollow-points, and even then you may not succeed. It seems that the first layer of drywall gets sliced like dough by a cookie cutter by the hollow-point. Often the hollow-point is plugged and then refuses to expand. (“Bad hollow-point, bad hollow-point!”) It acts like ball ammo on subsequent walls.



As fun as shooting stuff is, when you continue to get the same results, you're just getting sunburnt. Here Jeff Chudwin is busy testing bullets in gelatin.

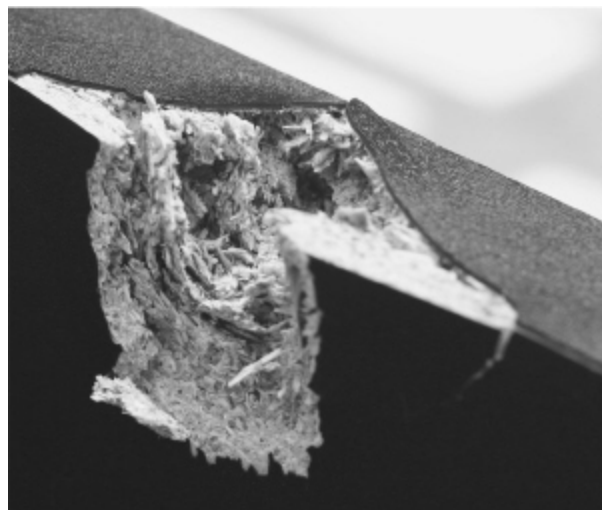
Furniture

Furniture for the most part is like lumber. Unless you've got enough, it won't stop bullets. Again, we're talking ball ammo. A .45 230-grain fmj will penetrate one two by four and stop in the next. Sometimes. Occasionally it will get through the second and lodge in the third. Building your house entirely out of lumber, to provide intra-room ballistic protection, isn't possible without winning the lottery. Plywood doesn't do much better until you get to the really thick stuff. Then it acts like high-grade lumber. Beds, dressers, nightstands, bookcases are not cover. They are concealment. The common cheap furniture most college students and many other people have is even worse. The particle-board construction is covered with a vinyl veneer. All the typical computer desks, cheap bookshelves, desks, many tables, are particle-board construction. Plywood is made by planing sheets

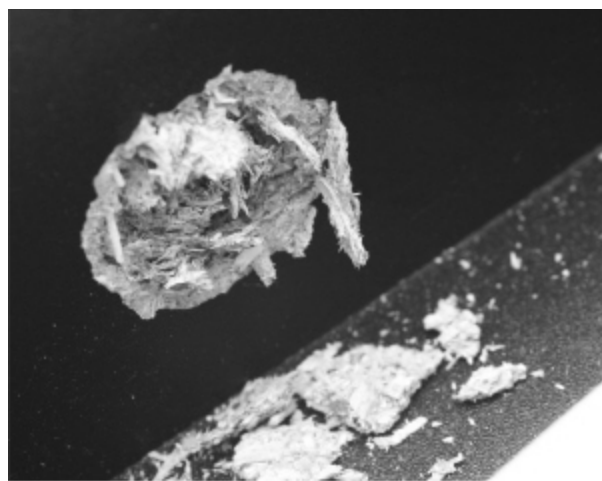
of wood out of the logs, and gluing them together. By arranging the grain of alternating layers at right angle to each other, plywood can be quite stiff for its thickness. Particle-board is made by mixing wood chips with glue and pumping the slurry into a form. It has less density (and much less strength) than plywood. It has the benefit of being strong against compression. Stand a table leg made of particle-board up, and it will hold a lot of weight, Almost as much as real wood. Turn it on its side and use it to bridge a gap, and then put weight on it, and you're in for a surprise. It collapses quite easily. Why do furniture makers use it? It is cheap. And it is not much good against bullets. When a bullet strikes wood the wood splinters, twists, and the grain resists deformation. The bullet pays a price for the work it does. Particle board just breaks into pieces. A little bit shooting of old furniture showed me I would not want to count on particle-board furniture for more than concealment.

But, you can put stuff in your furniture. I first learned of this from a fellow who lived in a bad part of Detroit. (When someone who lives there tells you "it's a bad part of town" believe them.) He wanted to have some kind of protection from the front door to the bedroom, in case he had to "fort up" during a home invasion, until the police could arrive. His entry was stoutly reinforced, so he was going to have enough time to call 911 and hold on until help arrived. He put bookcases flanking his bedroom door, filled with magazines. A certain yellow-cover, thick, coated-paper magazine. Oh, what the heck, he stuffed the cases full of National Geographic magazines. Which stop just about anything less than a bazooka. Paper is bad for bullets. Paper is hard, abrasive, has grain to resist tearing, and is heavy. The coated paper used in many magazines is even more so. Coated paper has a thin coating of clay fired and bonded to the surface of the paper sheet in the core. That's the glossy stuff you see in magazines. For a time I worked in and managed a paper warehouse that catered to the printing trades. In that job you learn very quickly to read the "K" weight of paper. The weight of a thousand sheets. Sheet-for-sheet, coated paper can have two to three times the weight of uncoated stock. A carton of coated paper can have half the volume and greater weight than the carton of standard copy paper you just picked up. Bullets have an even tougher time getting through or pushing coated paper aside. Packed tightly in the shelves,

his back issues were proof against even 12-gauge slugs and buckshot. (I've seen the photos.) I did a bit of testing myself, and you can't get a 230-grain .45 or a 124-grain 9mm through four issues. There is one drawback. The things are heavy. You may have to reinforce your floor under the location of the bookshelves.



The cheap furniture you get on sale won't stop anything. Here an old bookshelf has failed to stop a .45.



The second layer of “structural” support of the bookshelf.



**However, pack that shelf with paper, and the results are different.
Three inches of newsprint brought this 230 to a screeching halt.**

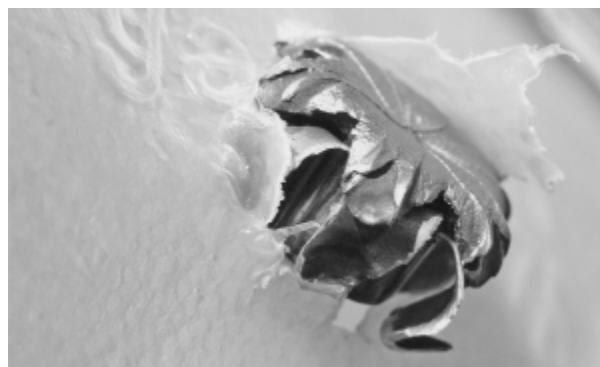
Vests

One subject that won't go away is what do bullets do to vests? As in, bulletproof vests of the soft, concealable kind. There seems to be a persistent rumor or line of thought that hollow-point bullets, due to their sharp edges, slice through vests. The first time I heard the rumor was when Richard Davis was going to test a vest with Black Talon ammo. At the time Black Talon was rare, expensive, and about to be yanked off the market. And he was going to expend a bunch testing it against an expensive vest. (It's good to be the king.) In short order he demonstrated that the sharp edges actually stopped the bullets better. They had no leverage to cut the Kevlar, and stopped even sooner in the vest than the hardball did.

The typical result was a bullet that stopped in the second, third or forth layer of an 18-layer vest. Except for some particular 9mm ball. Some military ammo has been made with steel jackets or cores, or a very hard bronze jacket over a hardened lead core. Those will go right through a regular vest. Luckily for police officers, it has always been relatively rare. Unlucky for us experimenters, the legislators just wouldn't leave it alone (egged on by the Brady bunch) and "armor-piercing" ammunition is not allowed to be made. Except for those making it for the government, of course. The definition is that a bullet cannot have a jacket of more than "X" percentage of copper by weight, nor of a hard material such as steel, bronze,

etc. It is allowed to own such ammo, you just can't make it or sell it. So if you come across an ammo box of steel-jacketed military surplus ammo your Great-Uncle brought back from whichever war he was in, you can own it, and even shoot it. You cannot, however, sell it at the local gun show as part of cleaning up his affairs.

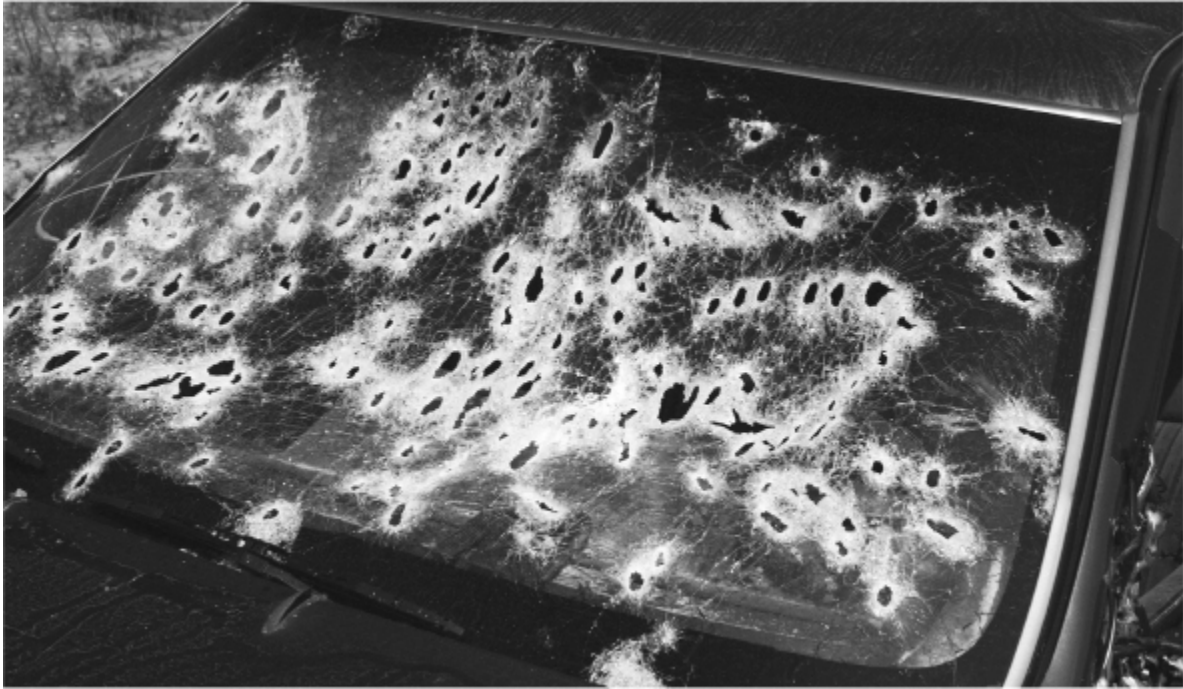
Vests can be counted on to stop the bullets they are rated for. However, if you take it into your head to "test" a vest or two, a few words of advice; You can make any vest "fail" if you put it against a hard surface. A vest, draped over a water jug or foam pillow, will stop bullets that it won't if you lay it against a board, the ground, or drape over a wall made of a hard substance. So if your buddy drops a surplus, beat-up vest on the ground and drills it with his hi-cap wondernine, don't be surprised if the bullet is in the dirt. I did that more than a few times with the inventor of soft-concealable body armor, Richard Davis. We then hung them loose, or put them on a soft surface, and they stopped the same load. Why? The Kevlar (or whatever new wonder fiber is used in the future) stops the bullet by not breaking, and slowing it down in a small, but necessary space. If you back the vest with a hard surface, you in effect pinch the fibers of the vest between the surface and the bullet, breaking them and increasing penetration. Which is why hard plates added to increase rated stopping power go in front of the vest and not behind. With a hard trauma plate or rifle plate behind your vest, you're decreasing the front, soft, panels. If you put the hard plate in front, it takes the brunt, and anything that might get through then gets soaked up by the soft vest.



The sharp edges of hollow-point bullets actually decrease penetration of bullet-proof vests.



What bullets are made of matters more than their velocity. Each of these buckets contains 300 kilos of future bullet cases. The jacket alloy can make a big difference in what a bullet gets through.



Windshields are very bullet resistant. Even hitting the window an inch away from a hole can stop the bullet.



The door stops almost everything handgun, and it isn't even an "armored" door. The windows stop almost nothing.

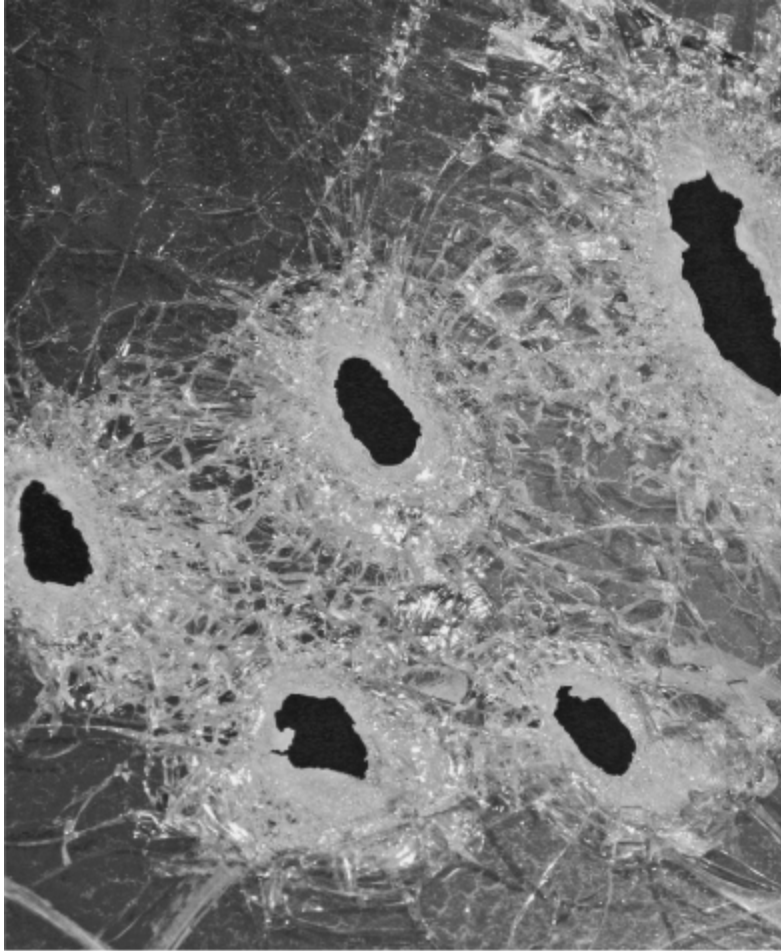
The second thing to know is this: Richard Davis is known to be slightly crazy. There is no need to wear a vest you are testing. Several people have gotten hurt from "testing" a vest while wearing it, and Richard himself will be the first to tell you "Don't do this at home." No kidding.

Last, vests only stop what they're rated to stop. If you wanted more, you should have bought more. And if you plan on wearing a vest, it would be a good idea to wear a vest that will stop whatever you are carrying. Its bad enough to get shot with your own gun in a fight, but to get shot through your vest because you insisted on carrying something that would get through it is just stupid.

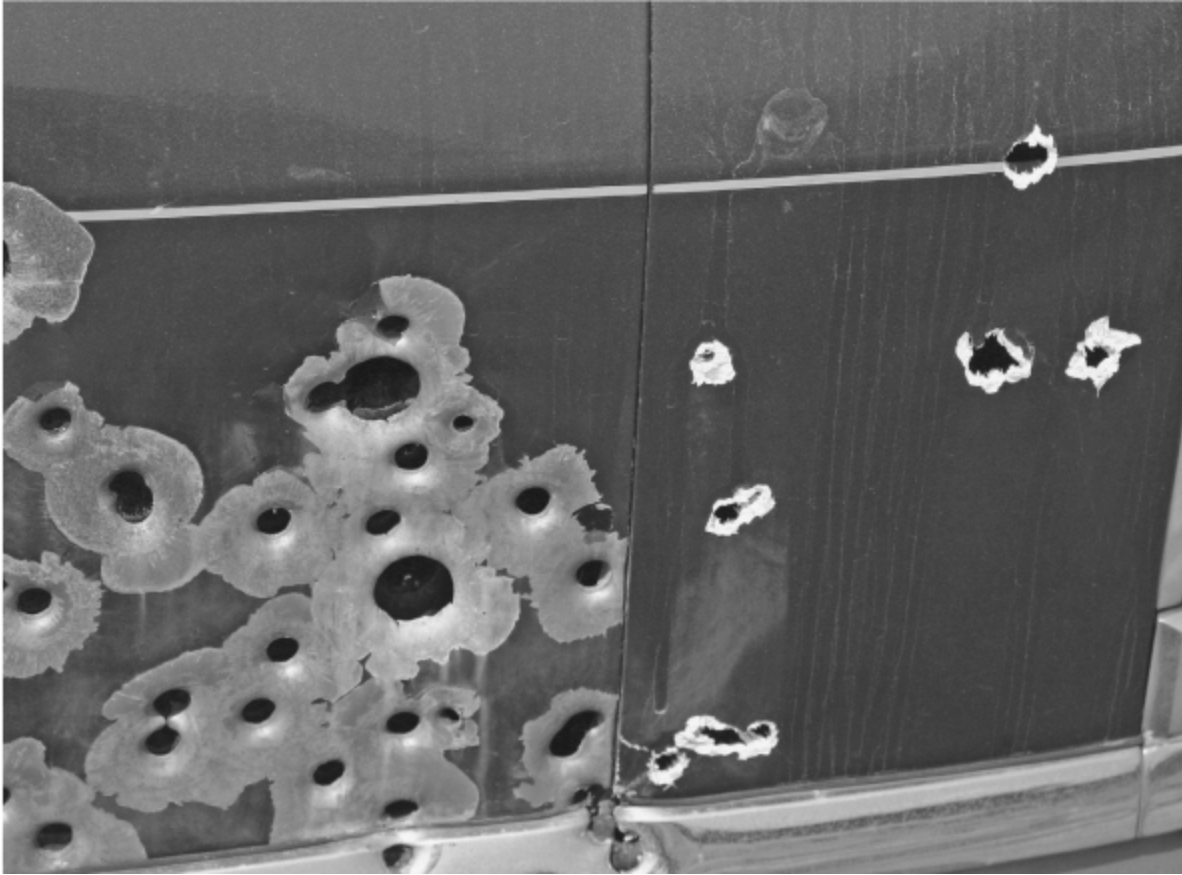
Cars

Vehicles are pretty resistant to handguns. Even the “hot” 9mm loads fail more often than not, when fired into a vehicle. If you really want to get a 9mm bullet into a car with any chance of success, you have to use steel jacket or core ammo, and your success will be better firing it from an smg with a barrel longer than a handgun. The doors are not just a couple of layers of sheet metal. They have internal bracing for the door, and for the last couple of decades now they’ve had impact bars to keep the doors from simply caving-in on side impacts. Add in the window mechanism, any cables, motors or other gear for windows, mirror or for sound systems, and there is a lot in there. The trunk is wide open, but you don’t drive from the trunk. The trunk lid and seatbacks offer some protection. The windows are very tough on bullets. One interesting thing to note on windshields: they are laminated for safety. The lamination makes them very tough. At least from the perspective of handgun cartridges. And, you can’t tell what caliber the bullet was, from the hole it left behind. Let’s say you shot a windshield with 9mm, .40, .45 and .223. (Why, I just did.) The holes will all look the same. If anyone walks up and says “Oh, a 9mm hole there, and a .223 hole over there” they’re either just guessing, read the forensics report, or blowing smoke. The holes don’t look different.

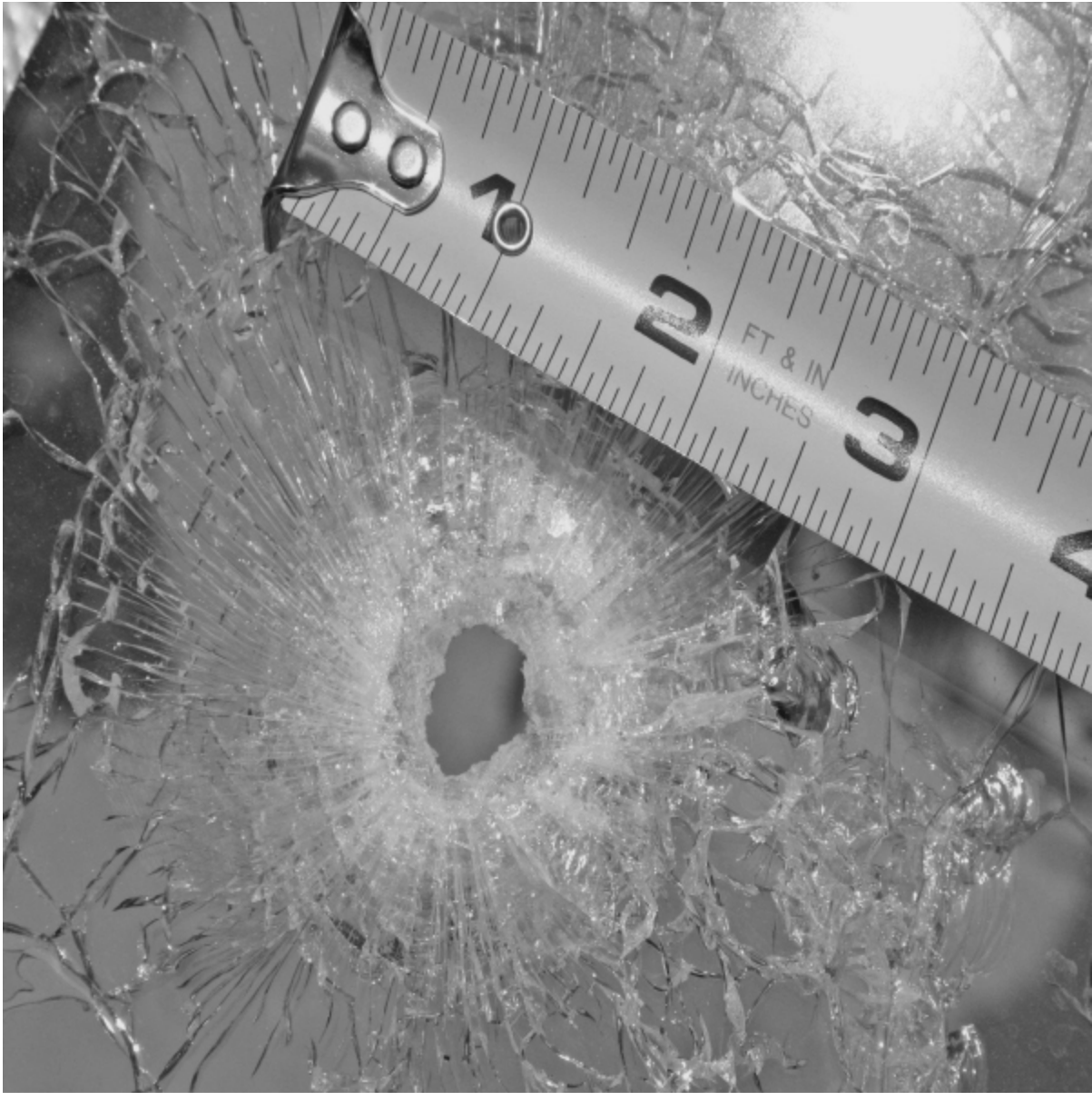
The trip through glass is also very hard on the bullets. Usually what gets through are fragments so small they do not create more than cosmetic wounds. Catch a fragment in the eye and you can suffer sight loss, but good glasses will protect your eyes and the doc can clean the marks off your face from the rest of the fragments. Shooting windshields usually only causes the driver a problem with seeing where he is going.



Bullet holes in windshields all look the same. Here we have 9mm, .45 and 5.56.



Trunks are just sheet metal, and stop very little I've poked a .32 Auto into a trunk. Don't hide there.



Can you guess what made this just under half-inch hole? A 5.56 round.

Side windows are a different thing. Instead of being laminated they are tempered. The first shot punches a hole through and “crazes” the window, fragmenting it into thousands of pieces. The second shot usually knocks the crazed glass out of the frame, leaving a wide-open window. The first bullet is typically fragmented into useless pieces, but the second and subsequent shots go through in one piece.

So, shooting at vehicles with handguns is usually a waste of time. Now, if you’re in a bad spot, he has a vehicle and you have a handgun, don’t keep

me from doing what you need to do. Just don't expect his car/truck/SUV to overturn and burst into flames from your shots. And if you're in a vehicle being shot at, get your head down and keep driving. Drive out of the bad spot, and either call for help or call for artillery fire on that spot. Do not stop, get out and "duke it out" with the bad guys. From talking to those who have been there (and "there" have been a number of places) a good driver is worth a car full of good shooters, when it comes to getting you out of a jam.

Chapter 6

Longevity I

Have to confess; this chapter doesn't have any gut-wrenching endurance tests. No tales or reports of vast quantities of ammunition consumed in a single test session, nor debriefings of departmental armorers about the two decades of service the unit's 1911s delivered. Unfortunately, vast quantities of ammunition for endurance testing is something only departments can afford. (As in, you and me, the taxpayers.) And having done the testing, they do not see fit to tell the rest of us what they found. There are a few reports we can glean information from. However, most of the high-volume shooting now being done by our civil servants is done to the growing legions of "plastic fantastics" the Glock, XD, S&W M&P and the rest. The powers-that-be are interested only in soulless tools to be issued to mostly uncaring personnel, to do a distasteful job. It is up to use, the upright citizens, to add a little glamour, fun, panache and style to the proceedings. (At least that what I tell my wife when I go off to competitive matches. "I'm taking style to the world.")

The question is, how long will your 1911 last? And how much work is cost-effective in extending that life?

We tend to think of the "longevity" of a firearm in terms of how long it lasts without anything at all except ammunition. Ironically called "Israeli Maintenance" by some, benign neglect is not really a maintenance method. If you shoot anything long enough without caring for it, it will quit. Even before it quits its performance will begin to drop off. Some things need to be replaced on a schedule. Recoil springs are a good example here. Yes, your 1911 will still be functioning 50,000 rounds from now with its original spring. But both you and it will be happier if instead you are on at least your fifth spring. Some would say tenth. "But springs cost money" someone will say. Ahem. If you pay the full retail price of \$7.95 for each of those springs, you will at the 50K mark have a grand total of \$79.50 invested in springs. Or only \$39.75 if you after each 10,000 rounds. If you reloaded your own

ammo, and have shaved the costs down to the minimum (let's give a reasonable \$63 per 1,000 rounds) your ammo costs have totaled \$3,150. That's right, over three thousand dollars in ammo costs, and you're whining about less than forty bucks in spring costs? The three grand in ammo costs probably also represents ammo fired in matches, and it is easy to spend a couple of grand a year just shooting at club matches and the occasional state or area match. So, ammo and match fees alone, those 50,000 rounds of ammunition represent something on the order of \$10,000. Quit whining about the springs, for God's sake, it's undignified.



The Glock seems to come apart when things go wrong. Then again, 1911s have done so too. (Photo courtesy Nik Habicht.)

So keep things in perspective: in the scheme of things springs don't cost much money.

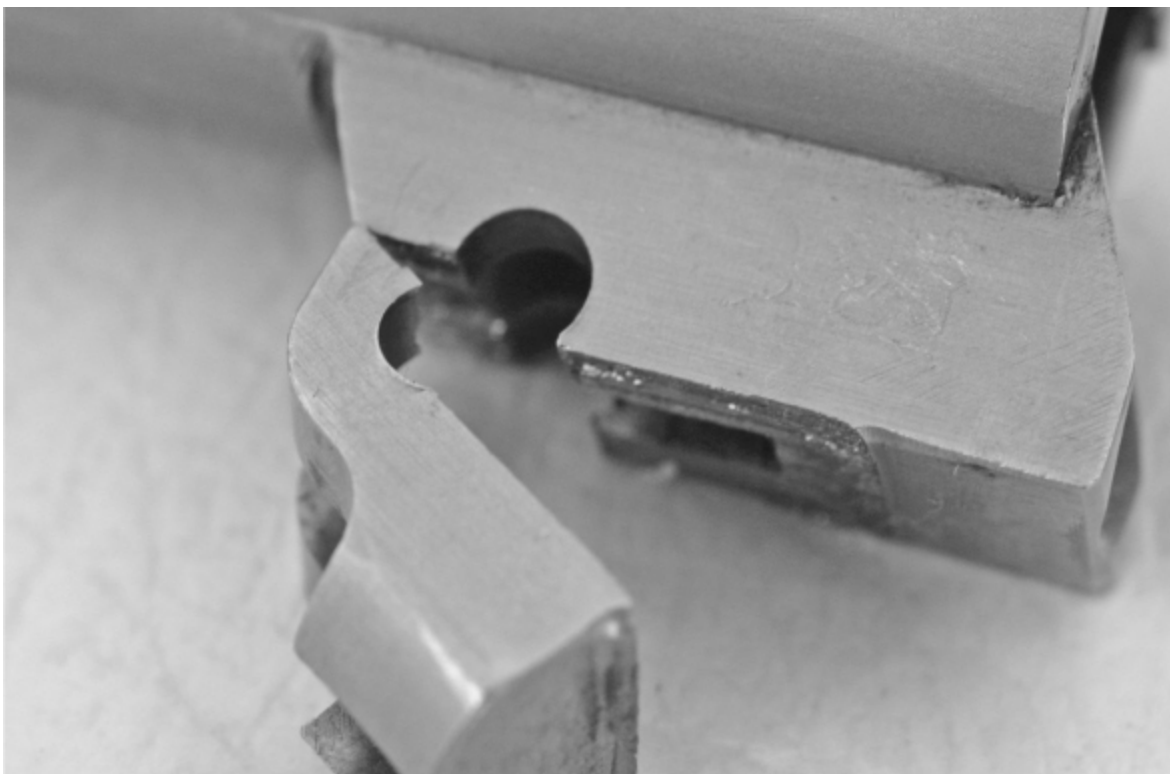
Long-term, you can consider the barrel to be an expendable part. If yours is still accurate at 50,000 rounds, great. If not, then a new one is a

tenth the cost of the ammo you've shot. However, a good barrel, properly fitted, has a service life of a lot more than just 50,000 rounds. How much more? No one really knows. It depends on the caliber, the ammo, and your firing rate. Lead bullets wear less than jacketed. Low pressure wears less than high. Slow firing rates wear less than fast. It all has to do with heat. So, fire your .45 ACP 1911 with lead bullet reloads, and not heat it excessively, and it will last forever. (More on that in a bit.) Fire a .38 Super, shoot 115-grain jacketed bullets at Major, and shoot many strings of fast shots, and you'll use that barrel up faster. But how much is "too much?" On the low end, you probably cannot wear out a barrel. I, and many other IPSC and bowling pin shooters, have put literal tons of lead bullets through our guns. I have a couple of 1911s that have over 100,000 rounds each through them. I have a bunch more with more than 10,000 and less than 100,000. The two high-mileage guns were my main and backup guns for a couple of decades of IPSC and bowling pin shooting. Jerry Barnhart has me beat. Jerry used to shoot at our club before he got his own bit of property and built a range. He was often practicing in the Spring before he won the Steel Challenge again. His practice session was simple: park his van on the range. (You could do that then, now my club does not permit it due to safety. Not Jerry's fault.) He'd spread a tarp, put up his steel plates, and start shooting. His ammo supply came from the 5-gallon bucket he had in the van. It would start half-full. (I suspect he practiced "only" two and a half gallons simply because he couldn't carry five gallons of .45 ACP ammo to the van.)



Compared to the cost of the ammo you'll shoot, the cost of recoil springs and shock buffs is nothing. Don't be cheap; let your 1911 enjoy itself.

Once the ammo was gone, he'd collect the brass, put the gear away and go home. He sold that gun in a fit of lunatic behavior. Any time you sell a gun you do well with, we can question your grip on reality. When he sold it, it had on the order of 300,000 rounds through it. A few years after, he had a chance to buy it back, and did. The owner had done nothing to maintain it. Jerry sent it off to the gunsmith who built it, and had it inspected. He still uses it from time to time, with the ammo count (last I heard) somewhere near 350,000 rounds, and it still works fine. Still a tack-driver, too.



A badly fitted barrel can quit before its time.

At the other extreme, I know competition shooters using .38 Super Open guns who feel they are lucky if they get 40,000 rounds of accurate life out of a barrel.

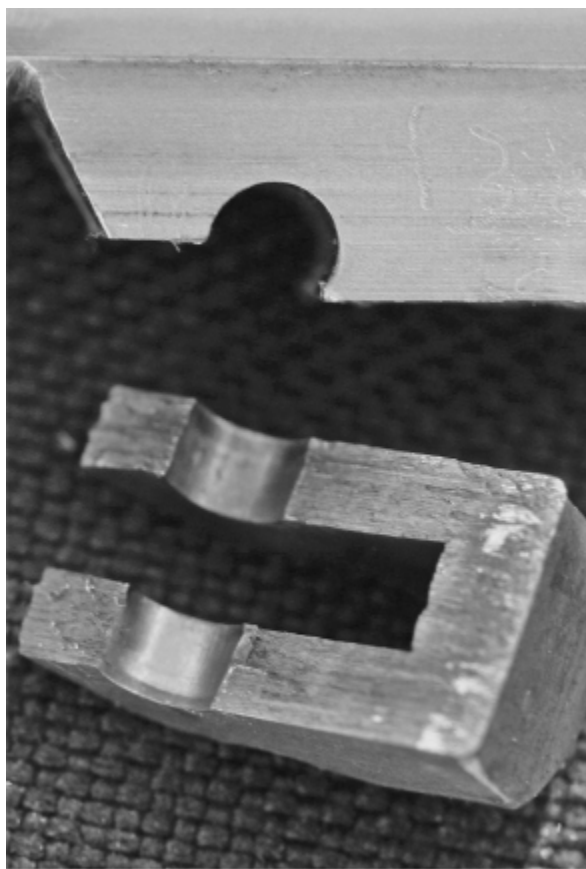
So, let's call it 100K. At 100,000 rounds you've now shot over six grand in ammunition. A new barrel? From \$125 to \$175, and on the order of \$75 to fit it. Consider the trigger, hammer, sear and other parts in the same league as the barrel. By the time you've gotten to the 100,000-round mark, a complete overhaul may seem expensive. But, having your gunsmith fit a new barrel, and drop in something like Bill Laughridge's Cylinder & Slide Drop-In Trigger Kit just doesn't add up to more than a fraction of the cost of the ammo you've fired.

What goes bad, when a 1911 wears out? Good question.

Barrel fit

If the barrel is soft, or hasn't been properly fitted, you can expect wear on the outside as well as on the inside. The lugs on top will begin to round

off. A really soft barrel won't last long at all. I have a dead-soft no-name 1911 barrel a customer of mine had had fitted. ("Hey, it was \$50 less than the name barrels!") the top lugs peened and set back in less than 1,000 rounds. They peened so badly that the slide began binding in travel, and causing malfunctions. Luckily, the damage to the slide was minimal, and he didn't have to spend for a new slide along with his second new barrel. Using a recoil spring too light can cause premature wear, too. Fast unlocking adds wear to the locking lugs, and also increases the velocity of the barrel as it strikes the frame during unlocking.



Once broken, this 1911 needs a new barrel for sure. Maybe a new slide, too.

But most of the bad wear that happens (as opposed to the unavoidable wear) comes from bad fitting. A badly fitted barrel can even break. I've seen bottom lugs shorn off clean. Another worn-out demonstrator gun on hand is a customer's. He had had a name gunsmith build him a Steel

Challenge gun. The barrel was so badly fitted that the bottom lug broke off in short order. Rather than replacing the barrel, the gunsmith welded the bottom lug back on. (I kid you not, he welded a Bar-sto barrel back together.) To add insult to the injury, his welder used carbon steel filler rod, on a stainless barrel. The carbon steel blued when the barrel/comp assembly was dunked back in the bluing tank. It survived the test-fire, but didn't shoot the same. In the Ransom rest, it shot groups that were 1 inch wide and 12 inches tall at 25 yards. And in less than a year's practice the top lugs of the barrel and their corresponding lugs in the slide were peened and beaten back. That's when it came to me, looking for help. The only solution was a new top end.

An equally hard bushing lasts almost forever. Unless you shoot the gun while it is packed full of sand, the wear isn't going to be that great. However, a soft bushing, or a recoil spring that is too-long and "stacks" in recoil, will cause bushing failure in short order. "Short" as in less than 10,000 rounds for a soft bushing, and less than 1,000 for a stacking spring.

Slide-to-frame fit

The better it is, the longer it lasts. If your slide and frame are properly hard (that again) and the rails are machined and lapped, you'll find very little looseness even after many tens of thousands of rounds. If, however, your frame was simply peened and lapped, and the bearing surfaces are small, then you can expect looseness after a few tens of thousands of rounds. However, a hard, well-fitted barrel, even on a somewhat loose slide to frame fit, can (and usually is) still accurate. What matters for accuracy is repeatability, that the slide and barrel lock up the same way each time, regardless of how loose the fit is of slide to frame.

Lockwork

Back in the late 1980s and early 1990s, Chip McCormick was pioneering Titanium parts in 1911 pistols. We had lots of Ti parts, to decrease weight. One such part back then was a Ti hammer. Back then (and now, too) Chip's parts were marvelous. I stopped doing trigger jobs because of him. Why stone and fit hammer and sear? For the time and effort, I could

simply buy McCormick parts, drop in and tune, and be done. The cost to the customer was the same. All I had to do was convince the customer that the CMC hammer looked good, and life was a lot easier. I installed one of Chip's titanium hammers in my .38 Super competition gun. At the time, getting a reliable trigger pull under 2 pounds was not easy or common. I wasn't a great fan of such a light trigger (not then, not now, but many were and are) so I tuned mine to be a bit heavier, about 2.5 pounds.

What we found out was that titanium was not good in shock. It took wear OK, it was great for abrasion, but shock it wasn't so good at. In due time we found trigger jobs failing. Chip, being the guy he was, simply swapped all the Ti hammers anyone had for tool steel hammers. Me, I held out. I talked to the staff of CMC at one of the USPSA Nationals about it. What they said was simple: "At about 30,000 it will start to follow, and it may double." Well, almost like clockwork it did. I shipped the Ti hammer back, installed the tool steel hammer, tuned it down to 2.5 pounds, and shot it for years after. When I built a hi-capacity .38 Super, it got CMC internals. All my built guns have name internals. Some Chip McCormick, some Cylinder and Slide, Ed Brown, Wilson Combat, and none have ever failed. None. Nor have any I've heard of, except those where the owner or his gunsmith went and "improved" the engagement surfaces.

The difference between old parts and new is one of two ways they are made: wire EDM cut, or MIM parts.

EDM is electrical discharge machining. If you place a carbon electrode near a conductive surface and pump a huge electrical load into it, you'll get a spark. The spark will erode the conductive surface. (And the electrode, too, but at a much slower rate.) To make hammers, sears, etc. you replace the electrode (which is how Mag na Port cuts slots in barrels) with a wire electrode and a plate of metal. To make hammers and sears, take a plate of hardened alloy steel and use a surface grinder to make both sides absolutely flat and of a known thickness. Then pass the wire electrode through it to cut the outline of parts, to include the hammer hooks and sear noses. With computer-controlled machinery, you can cut hundreds, even thousands of parts, to a precision unavailable to forged and machined parts. Simply put, do not stone the engagement surfaces of name custom-grade parts. You are

wasting your time, and you are grinding already perfect surfaces with an uneven cutting tool.



As one example, this Wilson CQB has 30,000 rounds or so through it, and shows no signs of giving up the ghost any time soon

The other method is MIM. Metal injection-molded parts are disliked by some shooters. The method is simple: you manufacture a slurry of plastic and powdered metal, then mold them into shape. Heat the parts, and the plastic is melted and vaporized, and the metal fuses into a part.

Either method is much more precise a manufacturing method than the old “forge a lump and machine a part from it” method used before.

Some feel MIM parts are less durable. Perhaps, in the first blush of MIM manufacture. I haven't had any break. And wire-EDM-cut hammers and sears are simply lifetime parts. Made of already heat-treated tool steel, you cannot wear them out by shooting your 1911, no matter how much ammo you consume.

Magazines

Magazine springs wear. Replace them when your 1911 begins failing to lock open when empty. As for the tubes themselves, you have to literally step on them, or drop them onto concrete, to cause a problem.

How long can I expect my gun to last?

That depends on the quality of the parts and the work. I have one gun in particular, and a group in general, to demonstrate. The particular gun is a Wilson Combat CQB. It has been written up in both volumes, and now has 30,000 rounds through it. Except for some dings on it from the mud and dust tests, and from my inadvertently banging it against walls, doors, windows and the like in training, you'd be hard-pressed to tell it from new. In fact, if all Bill Wilson did was to strip the old finish off, and apply a new finish, I'm not sure any of us could tell it hadn't been built last week.

It still shoots as accurately as it did when it arrived here.

The Bureau issued a Request For Proposal (REP) #6990 on Oct. 25, 1996. (An RFP is essentially a purchase order from the government in which bids and samples are solicited.) Eight companies responded: Colt's Mfg. Co., Kimber Of America, Springfield Armory, Wilson's Gun Shop, Les Baer Custom, Pro Gun, Cylinder & Slide Shop and C-More Systems. When the FBI decided they needed new pistols (something they seem compelled to indulge in every few years) they set up a test program for the 1911s they wanted. One interesting aside: the FBI had to amend the proposal to drop the requirement for a Series 80 safety system. Colt holds the patent, and no one could submit a 1911 using that system without Colt's permission. The most rational solution came to the fore: drop the firing pin safety requirement. The FBI had a bunch of other requirements, not all of which the people sending in guns were happy with. One was the follow-on

service and warranty requirement. Not that the makers weren't sure their guns could make the requirements, but that the office staff and service needed to keep up with the FBI requirements might be more than a small shop could handle. The FBI decided on a certain accuracy standard. All the guns were to be fired for accuracy. Then, they had to consume 20,000 rounds of Remington Golden Saber ammunition, and be tested again for accuracy. Why that load? No one would say. Golden Saber performed well on terminal ballistics tests, that's for sure. The Remington Golden Saber, while being accurate enough for shooting bad people, isn't the most accurate hi-tech hollow-point out there. The FBI wanted guns to shoot it into 1.5 inches at 25 yards from a Ransom rest. The ammo accuracy requirement was so hard that four of the six candidates left failed the test. You've got to wonder, when makers like Colt, Kimber and Wilson make guns that "aren't accurate enough" just what is the test testing?

Also, the jacket of Golden Saber bullets is harder than most, being a brass alloy instead of a gilding-metal alloy. Twenty thousand rounds was a tough test, made tougher by the FBI firing protocols. Two test guns were shot for 20,000 rounds worth. The method was simple: a truckload of ammo, dumpsters for the brass and boxes, and FBI agents pounding rounds downrange. They'd shoot 100 rounds, then wipe and lubricate. When they got too hot, they'd be dunked in cooling tanks. Every 500 rounds they'd be stripped, cleaned, lubed reassembled and gotten back onto the line. After 20,000 rounds they were tested for accuracy, and had to deliver groups under 2 inches.

Then, the FBI brought in groups of FBI field SWAT agents, who repeatedly fired standardized courses. The test guns consumed 50,000 rounds. They probably didn't have the gilt-edged accuracy they'd had at the start, but they were still all working.

The winner, by the way, was the Springfield. (Written up in volume 1.)

Buffer pads or shock buffs

Curiously, competitive shooters do not, for the most part, use shock buffs to increase the longevity of their pistols. Those who use them usually do so for a much different reason: cycling dynamics. Let's back up a bit,

and look into shock buffs, or buffers. They are made of one or another synthetic, formulated to resist oils, greases, powder residue and cleaning solvents. Polymers are measured and rated for their resistance to a force, called a durometer. A higher-durometer polymer resists deformation. Lower-durometer polymers will feel softer, but may not resist impact enough to keep from being deformed in short order. The purpose of the buffer is to lessen the impact of the slide on the frame, and increase service life of the pistol. In the 1911, it is not much use in that regard. The slide and frame on a properly fitted pistol will outlast most of us, and be used up only due to abuse, neglect or misfortune. If they make you feel good, great. But don't expect some magical increase in service life. (Hey, if 100,000 rounds isn't enough for you, what will make you happy?) You can actually decrease reliability by installing a buffer.



Mike Voigt at the 2005 USPSA Nationals. He has four empties in the air (on behind him, and one just coming out) and expects his 1911 to last a long time. Abuse, not ammo, is what causes early retirement of your 1911.

One way is to have the misfortune of owning a 1911 where the thickness of the buffer is enough to bring the slide stop slot right in line with the slide stop. Without the overtravel of the slide to keep the slide stop down, it may bounce up and lock the pistol open before the magazine is empty. The other way is to have a slide with a sharp edge on the impact

face, a sharp edge that cuts the buffer and allows the sliced up remnants to gum up the works. I've seen both quite a few times through the years.

If competition shooters don't install them to increase longevity, then why? Competition shooters can be a strange bunch. Anything that will improve their performance, even increases of a fraction of a percentage point, gets considered. One aspect of performance when shooting at the greatest possible speed is the felt impression of recoil. Not just how heavy it is, but what does it feel like? The division in recoil impression has shooters falling into three camps: fast and snappy, slow and rolling, and "I don't care." The fast and snappy recoil shooters want a gun that recoils and recovers so quickly that they have the impression that the gun never really recoiled or cycled, it just cycled lightning-fast and was done and waiting for them. The slow and rolling shooters don't care about speed, they want a gun they can shoot fast without the disturbance of violent recoil. They also don't want the psychological accelerant of a fast gun to impel them to shooting too fast. The "I don't care" crowd have found neither approach makes a difference in their scores, and so refuse to go to extra lengths to tune their 1911s. Does it make much difference? Are the "fast and snappy" shooters actually waiting for the gun to finish, if they happen to shoot a gun built for slow and rolling recoil? Not a chance. A GM in top form will be shooting pairs on a target in split times of .12 seconds or so. "Splits" under .20 are plenty fast for much shooting. To be competitive as a GM in Limited, Limited 10 or Production, getting down around .16 is the goal. An Open GM wants to be able to shoot the close targets faster than that. How fast does the gun cycle? As I've mentioned before, I've had the occasion to be on hand when a few 1911s have suffered broken parts and "ran away" that is, fired at their mechanical cyclic rate until the ammo was gone. They emptied quickly. I've also fired a number of machineguns and submachineguns, some with very fast cyclic rates. The fastest was a German MG-42, with cyclic rates reported between 1,100 and 1,300 rpm. My impression of the 1911s that broke was that they were faster than that. A cyclic rate of 1,200 rpm means the guns delivers splits of .05 seconds. If anyone seriously thinks that their blazing-fast splits of .12 even comes close to the mechanical cycling rate of .05 seconds, they are hallucinating.

However, arithmetic and impressions differ. So to increase the cyclic rate (usually with Open guns, but I've seen some Limited-10 guns built this way) shooters will add buffers. Building a stack of two or three, the slide travels a shorter distance in cycling, and bounces faster off the stack. That's the plan, and impression. In actuality, if they wanted to increase the speed of the bounce, they'd replace the polymer buffers with metal. Steel bounces off steel more so than steel off of any other substance. In physics or mechanical engineering you quickly learn about elastic and inelastic collisions. You have to search high and low to find a collision more elastic than steel on steel. The stack of buffers also precludes the slide from locking open when the magazine is empty. However, for competition shooters this is viewed as an asset. Without locking open, there is one less thing to go wrong. No need to worry about followers, slide stops, etc. And since competition shooters count their shots, know exactly how many they have, need, and have left, not locking open isn't a problem.

Such are the curious ways of the seriously dedicated competition shooter. Is all this hard on the gun? Probably. However, as they are usually wearing out a barrel in a couple of seasons, and the guns are rebuilt every few years, a little extra wear means little. By the time the slide and frame are getting loose, the shooter may have a different idea of just what he (or she) wants in slide mass, balance, length and configuration. The frame may get a new slide. The old slide can be fitted to a new frame for another, different, use. Or the 1911 in question can simply be completely overhauled, and put back in use. Competition shooters don't think in terms of "A competition gun" but rather the supply of parts they have on hand or can easily get, and the current configuration of parts they are competing with. Few think of longevity, as the game, their tastes, needs or the competition may change well before the gun has a chance to wear out.

Chapter 7

Tactical Illumination

Half the time, it is dark out. Depending where you are, and what time of the year it is, it could be dark less or more than half the time. But on average, it is dark out half the time. Some places it is dark all the time. Like indoors when someone turns out the lights. The great advance of electricity was not just in the convenience it provides, by powering motors and small appliances. Mankind turned back the tide of dark (much to the chagrin of astronomers) through electricity. Through the century-plus of development, we have made electrical illumination more compact, more durable and more efficient. So compact and durable that we can now mount lights on weapons, use them effectively, and expect them to last for more than a single operation.



**You don't necessarily need a gun every time you need a light.
Sometimes you're searching, and need to keep the muzzle off the
line of force.**



Sometimes you need a weapon-mounted light, and sometimes you don't. Give yourself the choice.

But we don't always want a light mounted on a weapon. We need non weapon-mount lights for two reasons: one is the Ed Mohn philosophy, and one is the Mas Ayoob philosophy. Ed is the big guy (literally, too) of a multi-jurisdictional SWAT team. His philosophy on lights is simple: "Two become one, One becomes none." If you have two lights and one breaks, dies, gets lost or you have to hand it to someone else you still have the spare. If you have only one light, when it goes you're literally in the dark. Two lights are better than one for the same reason those SWAT cops of his have a handgun as well as a rifle, SMG or shotgun. A compact light that is not in the way, ready to go when the main (or weapon-mount) light goes down, can be a literal lifesaver.

The Mas Ayoob philosophy is simple: pointing a loaded firearm at someone is assault with a deadly weapon. Now, if you were legally in the clear in so doing, great. But in the course of searching you will be pointing lights a lot of places. And not all instances warrant ADW. So, you're walking your dog, and hear a noise in the underbrush. What is it? Local skunk? Pack of rabid rottweilers? Local kids practicing for trick or treat? A plain light would work better there than a weaponmount light. Let's say

you're working late, and after a hard day slaving away you're going out to your car at night and hear a noise. Yes, if you illuminate the area of the sound with your weapon-mounted light, you'll be able to instantly deal with whatever you find. If, however, the building's janitor caused the sound, you could face ADW charges. Even if he doesn't press charges, you'd get a reputation as "That paranoid guy who is always pointing his gun at people." Which won't do you very much good if you do end up in a justified shooting. Imagine the field day opposing counsel will have, bringing witness after witness to the stand, each testifying about how you would routinely wave your gun at people, investigating noises with the light you had attached to it.

So we need lights both on and off the gun. Which is a lot easier to do now than it was even five years ago for the first 1911 book, let alone when I started this wild ride called tactical training and IPSC shooting. Back in the early days we had D-cell flashlights, and spotlights. A D-cell is a large battery. Plain old flashlights work OK, but they really didn't put out much light. The old Mag Lights put out more, but they weighed a ton. Which could be useful if you needed your light as an impact weapon. However, lights as impact weapons have fallen out of favor. Partly due to more efficient, compact lights, but also due to the lack of training many departments and individuals had in using a light that way. That is, none. The example here is the Malice Green case in Detroit. Two officers respond to a call of a suspicious man in a parked car. They confront him, a struggle ensues, and escalates. The suspect, Malice Green, will not quit, and the officers, in the close confines of the car (they entered the car to question and arrest him) can't disengage without placing themselves in greater potential danger. He doesn't produce a weapon, so they can't shoot him (although he did have a gun, they didn't see it) so the only option is to strike him with their flashlights. Which had little effect. They finally subdue him (One officer remarked "I couldn't figure out why he was fighting so hard. Was there a body in the trunk?") and he dies on the way to the hospital.



The Surefire (and other new lights) are small enough to do what we could not with the old D-cell flashlights.

Detroit had no training in impact weapons, let alone using a flashlight as one. And no policy on the subject. Nor mace, or pepper spray, or anything else. There was no tool available, nor training, between bare hands and the lethal force of a firearm.

The two officers were prosecuted, convicted and are now in prison. Detroit now has a flash-light policy: no light more than two cells in size, no metal lights, and not to be used as an impact weapon.

The other alternative, spotlights, were bulky and needed external power. You could buy half million candlepower, million candlepower and greater lights. The smallest was large enough to take up a lot of space in a rucksack. Even advances in technology couldn't help spotlights, and they really were useful only around the house or car, where storage wasn't a problem. Luckily for us, compact, lightweight lights unsuited for use as

impact weapons now abound. Surefire makes many of them. As does Streamlight. What do you need? And how can we measure it? Lights fall into three categories: Navigation, Illumination, and Compliance. The third category really didn't exist until Surefire and Streamlight made lights bright enough. Now we have a choice. As for measuring, the traditional method was a unit called "candlepower." A candlepower was roughly the light output of (you guessed it) a candle. However, the measuring method only measures the brightness of the brightest part of the light beam. Another measure is the Lumen, which measures total light output. As with all things, having horsepower doesn't necessarily get the job done. The problem with a lot of the cheap million-candlepower spotlights was the reflector. Many did such a crappy job of focusing the light that your million candles were scattered across the landscape, and not focused on the item of interest. One approach was the old Mag Light, which used an adjustable head, letting you focus or spread the beam. It worked better than the older lights, but it was shown to be lacking when Surefire came out with their reflector designs.

A brief aside on light companies. I'll be talking a lot about, and saying good things of, Surefire. I don't own stock in the company, nor do I sell their products. I've known the VP for decades, starting back in the earliest days of IPSC shooting. But I didn't know he worked for the company when I started looking at, and praising their lights. Sure-fire has been the most aggressive about improving lights, power, designs, bulbs, and all the various details that go into lighting the night. They take an aggressive approach to user needs and niches, and offer more options than you would ever need. I like their lights, I use their lights, but that does not make me blind to other companies' products. So get used to seeing "Surefire" every time you turn the page. One thing Surefire has done is get us away from the old D/C/AA paradigm. They determined that for power output and long-term storage, the Lithium 123 battery was the best. And built their lights around them. The result is a bright light with a long storage life, but at the cost of short run-time. Some lights will exhaust their batteries in as little as twenty minutes of run-time. However, twenty minutes, expended in one or two second "bursts" still is a long time. As in 600 two-second bursts. Another drawback to the lithium battery is its short warning before dying. You'll get a few bursts, or ten seconds or so of yellowing light, then

darkness. But up to that point you get a full-burn beam. Lights using the D, C, or AA batteries fade, and fade, and by the time you're halfway through the batteries you've got a distinctly yellow light with less illumination.



Whatever light-holding method you use, it has to work for all situations.



Sometimes you need to make slight changes. Here the LA Sheriff's method is modified to work on this post.

Yes Lithium 123 batteries are expensive, if you buy them at the big-box store. Which is why you should be buying them from Surefire even if you don't have one of their lights. Currently, Surefire will sell you a twelve-pack of batteries for \$15. That's \$1.25 per, compared to two to three dollars each at the local store.

Navigation

You don't need a super-bright light to get to the car. And you really don't need a super-bright light to read a map. You only have to once fire up a relatively low-powered 65-lumen light on a map at night, with night-adjusted vision, to realize that. You'll be seeing a purple and green blob for the next ten minutes. Even while walking around in the dark, you don't need bright light. At the latest rifle class I was at, we spent some time doing night firing. We were checking our ability to engage a steel plate, and also comparing various flash suppressors to each other. In order to keep our vision relatively night-adjusted; we depended on LEDs and not our regular lights. While a 65-Lumen light was enough to illuminate the 100-yard berm, and the brighter ones more than enough, they were too much for walking around. Walking across the white gravel parking lot, using a 65-lumen light to navigate, was enough to blast out our night vision for several minutes. Many people depend on one of those little keychain LED (light emitting diode) gizmos for light to and from the car and door. That works. For real stealth, Surefire even builds LEDs into lights for navigation. If you want really hi-zoot setups, you can get your navigation lights in the infrared spectrum, so you can navigate while wearing night vision goggles. That is probably a bit much for just walking out to the car. A basic light like the E1 Executive is perfect for finding things in the dark without lighting the area like a rock concert or crime scene. At 15 lumens it provides enough light without glaring things out. And the single battery makes for a compact light, with the 15-lumen draw giving you a long run-time on that battery.



For illumination and compliance, a basic two-cell Surefire works wonders. The two-cell is the best balance of cost, size and light output to be had.



The Navigator uses both LEDs (the three outer) and incandescent (the central) bulbs to produce two levels of illumination. And compliance.

If you want a really long runtime, put an LED head on a regular light, like the Surefire Executive. Plenty of light for navigation, but not enough for illumination or compliance. You'll get hours of runtime feeding an LED head.

If you want a light for navigation and illumination, the Executive E1, with one cell, is great.





If you need a bit more than a two-cell light can give you, then step up to a Centurion C3. (Left) A useful increase in light, for one more cell and just as much runtime.



The Beast is one honkin' big light. That little thing next to it is a two-cell Nitrolon.



The Beast is suitable for signaling the mothership on final approach; 2,500 lumens, yow!

One way to get navigation LEDs and incandescent power in one unit is the Aviator. You get both bulbs in one housing, and select from one to the next using the power-on control. You have to fiddle a bit to get what you want, and in the event you burn or break one of the other, you have more of a maintenance hassle. But you don't have to carry two separate lights to deal with two different lighting needs. The pressure switch on my A2 is simple, if a bit "fiddly." You can press the button slightly, and get the LEDs. Press harder, and you get the incandescent. Screw in the tailcap a bit and the LEDs come on and stay on. You can still press the button to get he

incandescent (65 lumens) when you need them. Or just screw the cap all the way down and have both constant-on.

You can also navigate with a brighter light, as long as you aren't looking at maps or trying to be too stealthy. Something like the G2 Nitrolon, or the Z2 Combatlight, is perfect for that. The Z2 came first, and once it came out it was issued to every FBI agent at the academy. It runs on two batteries, produces 65 lumens, and has a run-time of twenty minutes. The G2Z Nitrolon is the polymer-cast version of the Z2, with a less expensive plastic housing but the same performance. For those who aren't into light lanyards, the G2 Nitrolon is the least costly, most durable, 65-lumen light you can get. And it is worth every penny. The 65 lumens of the two-cell lights are enough to gain compliance, a subject we'll go into in just a bit. A two-cell light is compact, fits in a pocket or the divider of the carrying case, provides plenty of light for a decent interval, and is so small it could not be confused for an impact weapon. There is no reason you should not own more than one.

Streamlight has a similar product, the latest of which is a special package called the "Thunder Ranch" light. You get a keychain light and a small tactical light, with the Thunder Ranch logo on them. The keychain light is plenty good enough to find your way, and the tactical is for illumination and compliance. Just be aware that using a light in the compliance category cuts into your night vision. Once you turn it off it will take a minute or two to start getting night vision back. Even longer if the terrain or buildings are a light color. (More bounceback to dazzle your eyes.)



The M3 with the turbo head is an M3T Combatlight, and will put out enough light to force compliance to nearly fifty yards.

Illumination

‘Lume can be anything from finding your dropped gun part, to determining the source of a sound in the dark, to searching the next treeline for the downed aircraft you’re looking for. You need light, and probably a lot of it. A basic two-cell light like the Z2 can do that, but more is better. The one I start with is a C3 Centurion, a three-cell light that puts out 105 lumens with the basic head, or 200 with the turbo head. Light comes at a price. While the 105 lumen head on the C3 gives a full hour of run-time, the turbo drops that to twenty minutes. If you want more you need to go to a bigger power source or a larger light head. The tactical lights on weapon-mounts for AR-15s provide 225 or 500 lumens, but you have a larger light to generate your illumination. As you move up you get more options for numbers of batteries, even the choice to go with rechargeable units.

The maximum is “The Beast” a light that sucks the power out of a dozen batteries, but provides 2,500 lumens. That is not a typo, twenty-five hundred lumens. As the crew at Surefire likes to joke, “Good for signaling the mothership on final approach.” It costs you packing weight, being several pounds while the basic light is mere ounces. It also costs your wallet, to the order of three grand. I joked about the price with Cameron Hopkins, the VP of Surefire; “So, what’s the gun writer’s discount?” “None,” he said “There isn’t even an employee discount, nor a Vice President’s discount. If I want one, I have to pay the same as everyone else. Three grand.” As I do not have a spare three grand lying about for illumination amusement, I contented myself with a photo of the hefty boy.



Even a police officer has to have two lights, for there are times when he needs illumination, when he is not sure he needs a firearm. Here, his 1911 has a light on it, so he can use his hand-held for searching.

You need a tight beam for piercing the dark, and in an engineering detail that is user counter-intuitive, you need a larger head for a tighter beam. So

if you plan to search needing a wide beam, get a small head. Tight beam, large head.

More power cuts into run-time. Batteries are cheap, considering the performance you're getting. If you think you'll run out, either carry a spare light, or more batteries. Surefire can help you either way.

One option is to pack a Nitrolon unit away in your gear somewhere, ready when you need it. Then have a regular light, aluminum or Nitrolon, on your belt. And for long travels, or going to out of the way places, carry spare batteries in the Surefire battery holder.

Compliance

Ever walk out of the darkness into a brightly lit room, and find yourself having to squint and close your eyes until they adjust? That is the basis for compliance. Now imagine your night-adjusted eyes, with 65 lumens pointed right at them. You'll turn away. Caught by surprise, you'll snap your head around to get away from the light. The brighter the light, the larger the reaction and the reaction happens in a larger range of lighting conditions. Even if a determined attacker wades upstream though the light, he really can't see what he's doing. All he can do is swim upstream, and you have the upper hand tactically.

One officer I know found himself using his light for initial compliance. At the beam going on, the suspect covered his eyes and turned his head, but reached for and produced a folding knife. The officer immediately used a full-power front kick, striking the offender (he had been the one to change his status from "suspect" to "offender" by his actions) just left of center, on the diaphragm, half on the abdomen, and half on the ribcage. The offender reeled back from the kick, bounced off the wall behind him, and once he fell didn't move. He was carted off to the emergency room, where they informed him he had two broken ribs and was being charged with assaulting a police officer.



For much greater runtime, an LED light is great. This L6 offers as much light as a two-cell, but four times the runtime.

The brightness of the light provided the officer the tactical advantage. Without it, he could not have kicked so precisely, nor would the offender have been a relatively stationary target. The offender could also have been more active in not just avoiding the kick, but pressing home with the knife, requiring the officer backpedal while drawing his sidearm and probably shooting the offender. One could reasonably argue that the brightness of the light saved that man's life.

Faced with someone at night, your light can be (and should be) powerful enough that when you shine it on someone, that person cannot look in your direction. That is compliance.

For a long time my basic light was one or another of the two-cells, a G2Z Nitrolon, a Z2 Combatlight, or an Outdoorsman. However, the first time I tried a C3 Centurion I was hooked. For a bit more size and weight I could have the run-time of a three-cell light, and 105 lumens as well. Jumping from 65 to 105 lumens may not seem like much, but the brightness

difference is almost palpable. Nowadays, most of my “tactical” illumination needs are directed towards dog-walking. I do a fair amount of teaching, but I’m not on the County Search & Rescue list any more. I bet your area is much like mine: small critter paradise. It seems that the things we like for our neighborhoods are also attractive to skunks, raccoons, whitetail deer and roving bands of loose dogs. The gardens, hedges, small trees and small open areas provide the perfect edge line environment that many of them so like. Once they find a neighborhood they like, they don’t leave. Especially if a misguided neighbor is leaving food out for them. As I do not live out in the country, I can’t simply control the numbers and boldness of the nuisances by shooting them. At the tactical distances where the skunks, raccoons and roving dogs can’t decide to stay or leave, 105 lumens is almost enough to fry their retinas. None so far have stood up to the light, even the big, burly mutt that growled even as he moved away from the light.



The “Mr. Casual” hold, as done by Ned.



My style of “Mr. Casual” here holding the L6.

If used with people, you want to retain the advantage of surprise. If you are suspicious, don't shine your light on the ground to splash some light onto the person you're talking to, or suspicious of. All you're doing is giving their eyes a chance to adjust some to the light. Talk until you're sure you'll need the light, and then get the beam on them quickly, for maximum effect. The advantage something like the C3 gives you, with its 105 lumens, is that your opponent's eyes will be a long time adjusting. And even once adjusted, he'll have such distorted vision, from the residual light effects (those purple and green blobs you see) that you can have the advantage for several minutes.

Target Control

One way to get around the “light on the target, pointing a gun” problem (at least a little) is to use the “splash cone” of light to illuminate your target. Yes, you want the central beam, the brightest light, on target for compliance. But if you aren't using the light to force compliance, you can use the side of the beam to illuminate. With the side beam you have plenty of light, but the muzzle is off the target. If you need it, you're on quickly. When might you use such a tactic? For a police officer, confronting a

suspect who has his hands in his pockets. You need light to see. You need a weapon out just in case. (And hopefully departmental use-of-force guidelines allow or suggest it.) But you need to see his hands. Keeping the brightest beam on him (or her, let's not be sexist about criminal behavior) also keeps the gun up, blocking your view. With the beam center, and muzzle, off-target, you can see, you still have the lighting advantage, and you can bring the muzzle to bear quickly.

A similar situation would be the homeowner investigating a noise, movement or moved object, where you find yourself in-between the clearly "raccoon/stray dog/homeless person" situation and the "Ohmygodhehasaknife" situation. Someone who shouldn't be there, but isn't making threatening movements, actions or words, may need to be lit, but not have a muzzle directly on them. However, in some jurisdictions even having your gun out can be "brandishing" and assault with a deadly weapon, so know the law.

LED

Standard lights all use the same method that Thomas Edison discovered back in the 19th Century. They pump electricity through a wire that is too small for the electrical load. The resistance creates heat. The heat creates light. Called "incandescence" it has been the standard method for most of that time. How much light depends on the wire composition and the electrical load. Light-emitting diodes are different. The chemical reaction of the LED to the electricity produces light without heat. However, for a long time the frequency (color) and output of LEDs was limited. Red was it for the longest time. We now have white (or close to it) spectra light LEDs that can put out impressive amounts of light.

The latest one just received from Surefire is the L6 LumaMax. The light is noticeably larger than a C3 Centurion, but puts out nearly as much light. The specs say it equals a Z2 or G2Z at 65 lumens, but in side-by-side comparisons I'd rank it a lot closer to the C3 than the Z2. The light it produces is noticeably bluer. Our eyes are very good at adjusting to color temperature. (Actually our brains do the work, but we find easier to say "our eyes") At night, the yellow of the incandescent lights goes un-noticed,

as your brain shifts the colors to what we know them to be. But flash an LED on an object, and then the incandescent, and you'll immediately see how yellow the traditional light is, and how blue the LED is.

What is the big deal with an LED? Who cares about technical geekery? Well, an LED, for the light it puts out, takes less power than an incandescent light does. How much difference? The 65-lumen G2 has a runtime of one hour. The L6, rated for 65 lumens (but the visual impression is a bunch more) is rated for four hours of runtime. An LED produces less heat. A hi-lumen light puts a lot of heat into the air, the light and your hand if you touch it in the wrong spot. I have to admit to using hi-zoot lights for pedestrian purposes. (And often as a pedestrian, too.) I use them to put a lot of bright light into dark places where I'm doing maintenance, installing a part, or just working in tight, dark, places. After a long continuous run of several minutes, you can't touch the lens of an incandescent light without getting a quick reminder of the heat you've produced. I haven't gotten a blister yet, but I've only worked thus way with 65-lumen lights. Five minutes straight of running a 500 lumen light, and you might raise a blister. You can run an LED continuously and handle it all you want. And if you drop an incandescent light, even a rugged one like a Surefire, you risk breaking it. The tiny wire can only take so much. Nothing is impervious to all impact, but LEDs are much more rugged than incandescent lights are.

Light Use

So, how do you go about holding a light? With the oldest lights you had to hold them "saber" style. The little sliding switch on military and workman's flashlights could only be moved with your thumb. The pressure switch on the Mag Lights of decades ago allowed for either a saber or hammer/ice pick hold. The end pressure cap of the Surefire provides you both with a hammer hold, and what I call the "Mr. Casual" hold. The hammer hold is just that. You pick it up like a hammer handle or an ice pick, and the end cap under your thumb is easy to press. To use, lift your arm and pivot your hand so the heel of your hand is towards what you want lit, and press the button. The "Mr. Casual" requires a lanyard. Yes, a lanyard on a light. If you expect to use both hands for anything, you need some way to keep the light attached, or put it in a pocket. To be the casual dude, stick

your hand through the lanyard, and then hang the light between two fingers, with your hand open and relatively relaxed. When you need light bring your thumb down to the cap and press. You can easily find the cap and be ready to press at a moment's notice, without anyone noticing that you're fussing with the light; or that you even have a light.



Ned Christiansen showing the Harries technique.



The T-R uses a finger/thumb ring to hold on to it.

The way you hold a light determines the options you have in using the light along with your 1911.

Hammer Hold

The classic method is the Harries Technique. To get into Harries, hold the 1911 on target. Bring your left hand (assuming you're right-handed) with the light underneath your right hand, wrist-to-wrist. Bend your left wrist until the backs of your hands are in contact. You can now press the light button to illuminate where you're aiming. If you shoot Weaver stance this works just fine. The arm position is the same with or without the light, and your hands in contact let you index both light and pistol. It is, however tiring. A few minutes searching this way and you'll regret having skipped your sessions at the health club. The only way to rest it to lower the whole

unit, arms linked, to low ready. Or to separate your hands and let them hang at rest. However, Weaver is tiring, too.



The hammer hold with the T-R.



The LASO technique, when used with the Mr. Casual search hold.



Close up, you see the left hand pushes the light back, pressing the switch against your right hand knuckles.

You could just clap your hands together, palm-to-palm, but that isn't very useful. I've seen it done, but I do not find it at all comfortable. It is awkward, and your right wrist is bent and doesn't give you much control over recoil. At least, shooting Weaver the hand-to-hand method isn't useful.

Instead, use the Neck Hold. Bring your light up to your head. I find the "neck hold" for me is more like the "left ear hold" as that is where my light ends up if I relax as I lift the light. Keep the 1911 down in low ready, or holstered with your hand on it. Light as needed. And if you have to draw or shoot, do it one-handed. Now someone will protest that we've spent decades getting people to shoot with both hands. After all, it is better, right? Well, yes and no. At the USPSA Nationals for the last few years we've had a Dark House Stage. The only illumination you get is the one using the provided light. (No, you can't use your own.) At the two-to-four yard distances in the 'house I've done just fine shooting one-handed.

Mr. Casual

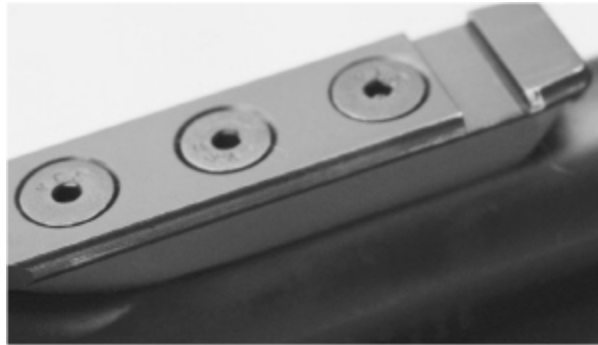
With the light protruding through your fingers, you use your thumb or the heel of your thumb to press the button. When you bring your hands together, you have two options: you keep your hands side by side, and use the heel of the left hand to press the button. Or you put the left hand forward of the right, and use the backs of the knuckles to press the switch.

One advantage of the Mr. Casual hold is that it is less obvious you are holding something. And it takes less movement to get the beam on target. Its disadvantage is that your left hand offers little support to your firing hand. But then, the only way to get a solid grip on the gun with your left hand is to mount the light on the gun.

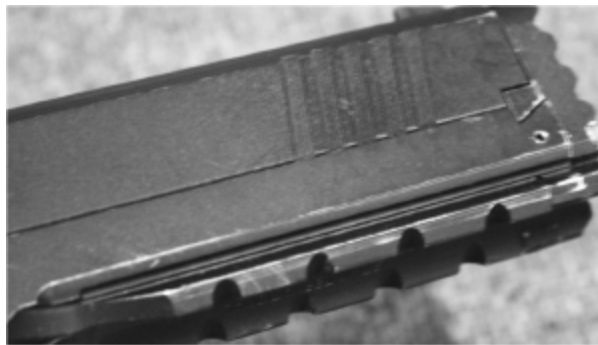
To shoot from Mr. Casual, bring the light to the front of your firing hand, so the base of your light hand is in contact with the tops of the fingers of your gun holding hand. You can either press the light back into the heel of the support hand, or place the button against the tops of your gun holding fingers. Squeezing your support hand turns on the light.



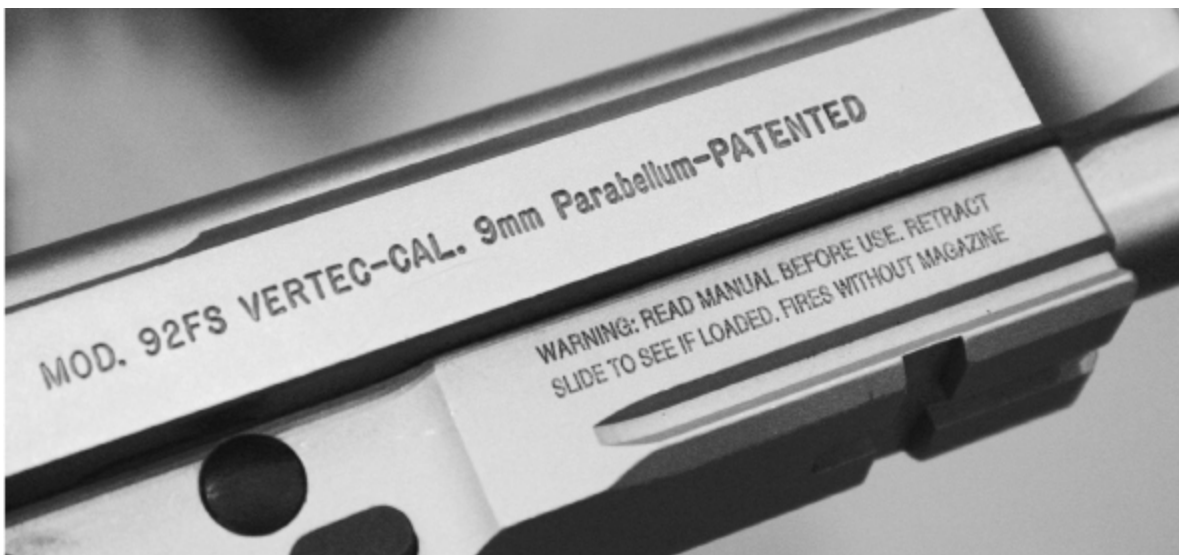
A Dawson rail secured to a Beretta.



Underneath the Beretta, you see the Dawson and its securing bolts.



Here is a very early light rail machined into the frame of an STI pistol. Custom work back in the mid 1990s, common factory stuff now.



New Berettas (and many 1911s) now come with rails machined into the frame.

Saber Hold

Hold the light like a light saber. (No Jedi jokes, please.) Instead of the lighted end poking out from the heel of your hand, it is out in front of your thumb. With older lights using sliding switches, saber was all there was. The sidemount click buttons allowed us to use either saber or hammer. For those shooting isosceles, the hand-to-hand method can work well. Also called the Ayoob method, you simply bring your hands together. Your off hand will be pointing the light slightly upwards from your line of aim. At typical distances this has the effect of pointing the center of the beam right into your opponent's face. (A good thing.)

Weapon Mounts

In the beginning, there was duct tape. While it worked (sort of) on long guns, it was hopeless for handguns. Then someone came up with the idea of mounting a rail on the gun. The best one for the 1911 was the Dawson, bolted with three hardened screws. So good, in fact, Dave installed it on a whole lot of other handguns besides the 1911. With a Dawson rail, you could mount any of a number of lights on your 1911. The problem was, they were all bulky. The Nitrolon series from Surefire had the virtue of being lightweight, while the Military series were nearly as heavy as the 1911 they were bolted to.

As engineers did what they do, and made progress in lights, housings, batteries and the durability of the package, smaller lights came to be. And bigger rails also came to be. The standard rail is now the M-1913, or picatinny rail. Close in size to the Weaver scope base, all modern weapon-mount lights attach directly to the rail, which on many pistols is now an integral part of the frame. With a picatinny rail on your 1911, you can easily attach a compact light. How good are the compacts?



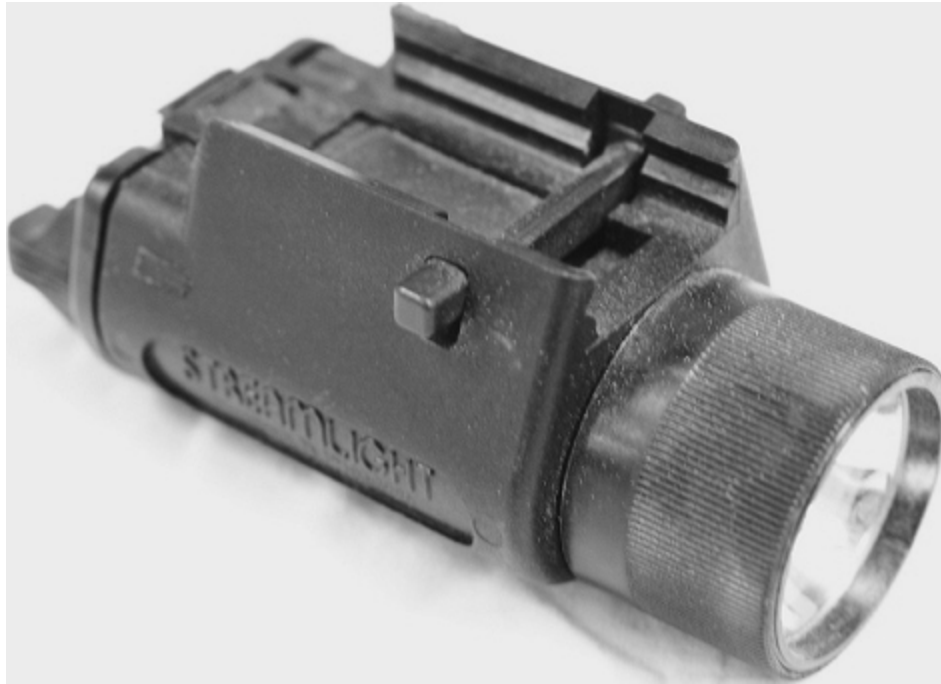
The ideal match up is to have the light behind the muzzle, to minimize powder residue on the light.

X200

I had several X200s on hand to test and inspect before I traveled to the most-recent class where I was to be doing some night firing. As a result, I was not surprised to see the on-range results. The X200 from Surefire puts out as much light as the Z2 or G2Z Nitrolon, the basic two-cell light. With a rocker switch or tailcap pressure switch, the X200 is smaller than the separate lights, fits right on the rail, and can be turned on and off without taking your hand or hands off the 1911. If you need to search without a firearm (or at least keep it out of sight for the moment) you can easily detach the X200 and use it with one hand. The easiest way I've found is to hold it hammer/ice pick style, and use the thumb to push the rocker switch on and off.

To add to the choices, you can have the X200A or B. The A has a tighter, more-focused beam (relatively speaking) that is better for compliance and for reaching into open areas. The B beam is a little more diffuse, better for getting a bit more spread, while working in enclosed spaces. To tell which one is which, turn it on and hold your hand a few inches from the light. Moving your hand back and forth, you'll find that the

A unit has a focus pattern at close range that looks like a diamond. The B stays circular at any distance.



The Streamlight M3.

What we found in that night's testing was that even a compact light like the X200 has power enough to illuminate a steel plate a 100 yards, and let you hit it given enough time.



The Streamlight M-6 with integral laser.

Streamlight

Streamlight makes lights, also. They've been at it for a long time, and have very nice lights to show for their work. One set is the Thunder Ranch Special. Clint Smith is the owner/operator of Thunder Ranch. Originally based in Texas, where he ran full classes on all subjects, he recently moved. Rather than spend so much time in the details and work of the overhead of running large classes, he now teaches smaller and individual classes. The Thunder Ranch special is a pair of lights. One is a tactical light for illumination and compliance. The other is a nav light LED with attached key ring. If you have your keys, you have the light to navigate with.

The weapon-mount lights from Streamlight are the M3 and the M6. The difference is that the M6 incorporates an aiming laser in the housing. The switch is the same kind of toggle switch, where you push the toggle in one direction for momentary "ON" and the other way to click it locked On. If you have an older M3 or M6, look into a new switch. My original unit took a dunk (me along with it) and was submerged for a while. After it was submerged it was a long time drying, tucked away in its pouch. After that it started getting a bit cranky in operation, and finally quit. Streamlight gave me a new switch, which has since proved more reliable in wet operations.

New lights have the new switch. Unless yours dates back to 2003 or earlier, don't worry about it. The M6 is particularly interesting, with its built-in laser. The laser uses the same switch for On and Off as the light, but underneath is the selector switch. You click the rotating switch from "Off" to "Vis" to "ill" to "vis ill" to select which you want. If you have it on Off, you can flip the rocker switch all you want and you get no light. That way you can lock it off for storage and not worry about dead batteries when you need the light. Flip to "vis" and you get just the laser. "Ill" gets you light, and the dual designation gets you both. A little fiddly in a fluid situation, but it does work. The best method is probably to use the dual selection. You use the light to verify you are dealing with a bad guy, and the laser to determine just where you're pointing. By using the "off-target" illumination technique you can still light up what you're looking at, and verify where exactly you are pointing. Need to shoot? Bring the laser up on target.



The M-6 with the laser on. You have a choice of light, laser, both or neither with one rotary switch.



The Streamlight thunder Ranch Special, an LED tactical light.



The key ring T-R special, for finding things and navigating at night.



Use your fingertip to push the switch either to momentary on....

Unrailed guns

If you don't have an integral rail on your 1911, what can you do? One is to have Dave Dawson put a rail on. However, as the more-compact lights gain favor, it will be increasingly difficult to locate an old Classic, Millennium or Nitrolon weapon-mount light. After all, for the cost of an older unit, you can buy (and have storage for) a pair of X200s. You can have your gunsmith install a rail. Caspian makes rails that can be bolted/soldered to the dustcover of your 1911. They do suffer from being a bit bulky, as you'd expect from an add-on rail. Or you can use an adapter. The Surefire adapter MR07 fits under the dustcover of your 1911, and provides a location onto which you can bolt your tactical light. It isn't perfect, but then no compromise is.

The MR07 is an aluminum housing machined to fit your 1911. You remove the existing slide stop and push the MR07 in place. Then replace the old slide stop with the provided one. To tighten the adapter and keep it from shifting, tighten the tensioning nut on the front of the stub that sticks down in front of the trigger guard. Once tight, the adapter is now ready to take a light. Advantages? You can put a light on a 1911 that does not have a

rail on it. You can move the adapter from one gun to another, as your needs, mood or budget allow or dictate. Disadvantages? It adds bulk, and you may not be able to use all the holsters you could before. It is a bit spendy, but not nearly as expensive as a new gun or new frame. If you tighten the tensioning nut too much you can bind the slide stop and keep it from lifting as it is supposed to. And last, if you have a match-fitted barrel, replacing the slide stop can cause a change in accuracy or zero.



Or to constant on.

But if you have to have a light, and don't have a rail, this can be your way to solve your problem.

Spares

If you have lights, you need batteries. Sooner or later, the batteries in your light will quit. (If yours do not, quick call the Nobel Committee for both Physics and Chemistry. You've got something there.) Spares work only if they are stored dry. A dropped light only works if you replace it with an undamaged lamp. You can't count on pockets keeping batteries dry and replacement lamps undamaged. Surefire makes a waterproof storage case for batteries and lamps. If you never need it, it is a bulky, heavy, expensive (any cost is too much if you don't need it, right?) extra thing to keep track

of. If you need it, it is the most compact, lightweight, bargain bit of gear you ever bought.

I haven't needed mine yet, and I still fall in with the second group. Get one or more. Leave them where you leave a light. Put your name on it somehow, so it doesn't walk off.

Chapter 8

Holsters

You have to have a holster to carry a handgun. Oh, pockets work, and in some cases are even preferred. But for daily carry, and security, you need a holster. The question is, which holster? The answer: there is no one holster that solves all problems. If you had the happy job of being retired from the military, living in Arizona, and teaching at Gunsite, you could easily find a comfortable holster for your 1911 that was fast, convenient, and worked in open carry. Without all of those (well, at least the living in Arizona part) that same holster might not be so good. If you are carrying concealed, the first rule is “It must be concealed.” Wait a minute. Let’s start things out by listing the rules, in order of importance, for the various carry modes. For this discussion, let’s define those modes as; Concealed Carry, Duty, Hunting, Open and Military.



You need a holster, but also spare magazines. In competition you want speed. For daily carry, you need some security.

Concealed Carry

This is for the average citizen carrying a 1911 for defense. We aren't considering an on-duty law enforcement officer. You'll be packing a 1911, two spare mags, perhaps a cell phone and/or PDA. The holster rules are as follows:

- 1) It must remain concealed.

- 2) It must be comfortable
- 3) It must be reasonably quick in presentation. (Draw.)
- 4) Retention matters only for physical exertions.

In many jurisdictions, allowing your handgun to be seen, even inadvertently, is defined as “brandishing.” Defined in some places as being the same as pulling it out, or pointing to it, as a threat. Your 1911 must not be seen. While concealment is as much a matter of clothing as holster, some holsters make it easier. A “high and tight” belt holster is what you’ll need. Pancakes and paddle holsters also keep the gun hidden. If your holster isn’t concealable enough, can you adjust? Yes. An outer garment of heavier cloth will drape better. If you’re wearing a belt that is too thin or too flimsy, a thicker/stiffer belt can help. However, wearing concealed in the heat and humidity of the Deep South may not allow for heavier clothing or thicker belts. A holster that holds the gun high and tight can run afoul of #2, comfort. If your holster is not comfortable, you will be fidgeting, adjusting it, moving in your chair or at the crosswalk to “get away” from the gun. An uncomfortable holster can give you a literal pain in the butt. Can you do anything with an uncomfortable holster? Not in my experience. A defensive sidearm that you can’t get to quickly enough might as well not be there. And extreme example would be a 1911 locked in an attaché case, hammer down on an empty chamber for safety. Very concealed. Very comfortable. Five seconds to get it in play. Can you wait five seconds?

Last is security. You are not likely to need security features on a holster used for CCW purposes. If no one knows you have it, they can’t try to grab it. But having it drop out while running would be embarrassing, at the very least. It would also be potentially damaging to the gun, and potentially fatal. My personal example is my hit-and-run incident. I was crossing a city street with the light, while a car was making a left turn. I wasn’t too worried, if you panic every time a car moves as you go to cross the street, you’ll never leave your home block. However, the car kept coming. Moments before it hit me, I realized I was not going to get clear, and hopped. (You do not want to go under a vehicle, ever.) I bounced off the hood and then the windshield, and landed in the road unharmed. Well, unharmed except for my temper. When the driver in the lane next to me, waiting for the light to change rolled down his window and asked if I was alright, I recall giving him a few

choice words in three or four languages. He rolled up his window. The Colt lightweight Commander I had on me, in my Gordon Davis Summer Special, was still there. As was the spare magazine. My Swiss army knife had been knocked out of my pocket, along with spare change, but my pistol was still with me. As good a test as it was, I can't see any way to replicate it with other holsters.



The G-Code holsters have a shirt guard. It keeps your shirt and safety apart, so you only get 1911, and not fabric, on the draw.



Concealed means concealed. If anyone sees it, you could be in trouble.



The military and police have determined that there isn't any more belt space. Thus holsters have migrated down to the thigh.



Competition requires a lot of magazines sometimes. Carrying all these concealed in daily carry would be a back-breaking job.

Duty

Either uniform wear, or plainclothes detectives. Uniform is a bit easier to define, while plainclothes is a bit tougher.

Uniform

- 1) Security
- 2) Durability
- 3) Wearable in vehicle seat
- 4) Speed of draw

There is one thing a police officer can always count on: any fight he (or she) is in will have a firearm present. Their own. A department that allows a

duty holster (uniform wear) that doesn't have at least some kind of security latch is asking for trouble. In the old days we used to think a thumb-break was security enough. Now we ask for more. The idea is to at least slow down an attempted gun-grab while the officer implements the departmental weapon retention system. (I certainly hope your department has one.) After that, a holster has to be durable. Daily wear, rain or shine, night or day, hot or cold, a holster takes a lot of abuse. Add in the occasional bang against a doorframe, seatbelt buckles and the like, and a shoddy holster can literally fall apart in a few months. A holster must be wearable in a vehicle. Unless you're working in New York (where you'll be using a Glock or other departmental-approved sidearm) you'll be in a car. You can't have a holster that won't fit in the car.



Your gear has to stay with you despite physical activity. Otherwise it does you no good.

Last is speed. A holster with a combination lock would be plenty secure, but slow. They'd still be trying to get the gun out of the holster while you were being laid out for your services. Speed is partly controlled

by practice. A “fast” holster you don’t practice with will be slow. A secure holster you do practice with will be fast.

You’ll notice comfort is not on the list. You may not be able to get a comfortable holster, given the nature of the job, and the departmental dictates. You may only be able to get a slightly more comfortable holster, which can be enough.



For hunting, a flap holster to protect your 1911 is a wise investment. Speed of draw rarely matters, and protection from the elements does.



Leather is cool. Galco makes leather holsters, good ones. Here is their Gunsite rig.

Plainclothes

- 1) Concealability
- 2) Security
- 3) Comfort
- 4) Durability

The whole point of being plainclothes is to be un-noticed. Unfortunately, that isn't always the case for many officers. Being assigned "plainclothes" and then being required to wear a suit, while working in a tough part of town, you may as well be wearing a uniform. Ditto things like sports jackets and polo shirts, and various other "cool guy" stuff that simply screams "police" to the observant. However, you still have to go to some effort to conceal your sidearm. Which means you need to select accordingly. Second is security, but not security against a gun-grab, but against activity. Unlike the CCW-holding non-LEO, you will be chasing people. (The CCW holder may be running, but only to the car, building or

cover.) Your sidearm has to stay on you while you run an obstacle course. Then it must be comfortable. If it isn't, you'll be fidgeting like the CCW-holder over there who has just leaned away from his carry gun for the third time. (I'm writing this part while in a local coffee shop, and this guy caught my eye as soon as he walked in: he was hunched away from his gun.) Last is durability. A durable holster will hold up to several years of sweat. More, if it made of kydex. Money spent on cheap holsters is money wasted.

Hunting

- 1) Weatherproofing
- 2) Comfort
- 3) Ease of removal

If you are carrying a handgun to hunt with (I would use a 10mm for hogs and other large game, in the 1911 pantheon) you want to protect it from the weather. That means a flapped holster. You aren't going to need a quick draw while hunting, so speed is not really a consideration. As long as you can do the draw one-handed, you're good to go. Comfort is a big thing, though. Without comfort you'll be tired sooner than not, due to your own ordnance. And ease of removal? Where I hunt, and many other places too, I'd imagine, a hunting license means you can carry while hunting. It doesn't mean you can carry in the car or truck, and walking from your vehicle to the motel where you're staying. Done hunting? Take it off. Need more clothes, due to cold or rain? Take it off and put it back on after you add clothing. A hunting license is not a CCW, and your slicker can cover you but not the gun.

Open Carry

- 1) Comfort
- 2) Security
- 3) Speed

Open carry can be a lot of things. It can be living in or visiting Arizona, where open carry is allowed by state law. It can be packing a handgun while hunting with a rifle. It can be working in the outdoors and needing a

sidearm. Your mode of transportation makes a difference. Are you walking, driving, riding a horse? Comfort can change from one to the other. In the physical activity of the outdoors, you need a holster that will keep the 1911 with you, regardless of the running, jumping or whatever you do. And since you're carrying it as a piece of emergency equipment, you want it fast. In open carry you may decide to forego security features except for a thumb break snap and friction retention.

Military

- 1) Security
- 2) Comfort
- 3) Durability
- 4) Speed

I should probably put the order as “security, security, security, protection, comfort, durability, speed.) The rigors of military use require extreme security. Beyond the simple running, jumping and falling we all do, military use also includes rappelling, riding in high-vibration vehicles like trucks on bad roads, tanks, helicopters and fixed-wing aircraft. It may include parachuting, wading and swimming, and always dust, mud, rain and more dust. Security means a thumb break and friction, and more retention is better. Including a lanyard. Comfort then rears its ugly head. If it isn't comfortable you'll either leave it behind, or have to turn it in “since you aren't using it.” It should go without saying that a military holster has to be durable. After all, it hardly makes sense to haul a sidearm with you if in short order you have to keep it in a pocket when your holster falls apart. Speed is last, for the sidearm is usually called into action after everything else is gone: rifle ammo, grenades, help on the radio. By then, speed of draw is not really an issue.



Competition does test holsters some. But climbing out of a chair is nothing like jumping out of a plane, and you should not expect one holster to do both.

Holster construction falls into one of three different camps: the kydex brigades, dead-cow territory, and the tactical nylon aficionados. Which you go with can depend on what use, which is comfortable, and even what model 1911 you prefer. Luckily you won't find a lot of restrictions on choices, if someone makes a holster (except of the cowboy action crowd) then they probably make it for a 1911. Other handguns are not so lucky. I'm

quite fond of the Browning Hi Power, but the choices I have for it are paltry compared to the choices for a 1911.

Let's look at a few



The military has gone big for thigh holsters, and many units issue kydex ones.



Cen-Dex makes great kydex holsters for your 1911.

Kydex

The big names (at least in my experience) in kydex are Blade-Tech, Cen-Dex, Talon Tactical and Uncle Mike's. Kydex is a tough synthetic, which is like saying Kevlar is tougher than cotton. Once a holster has been formed, you can't distort it by sitting on it, packing it in your luggage or probably even driving over it. I've had steel-lined holsters become temporarily unusable from going prone on them. I've had leather holsters fall apart from crappy stitching. Kydex isn't going to do that.

Blade-Tech makes hell-for-tough holsters and mag pouches. What I like is their dropped and offset holster, which is ostensibly made for women shooters. Those of us who spent too much time in the weight room find the high-and-tight "FBI-cant" holster design to be torture. Until the unlucky ones pad-out and gain weight, to become cylindrical, the FBI is the "wrong-be-I" for many of us. The dropped and offset holsters not only get the gun

away from my kidney, they also solve my personal problem: high waist and long arms. For USPSA Production, Single Stack and other categories, that's my choice. It would work as well for others like the Single Stack Classic, and IDPA, if the rules allow it. Cen-Dex and Talon Tactical make high and tight holsters that give me a bit of room, so I guess they'd be "not so tight." To complement the holster, you need mag pouches. For concealed carry or IDPA you'd want a two-mag flat and clean carry pouch. Done, they all make them. However, for USPSA Single Stack Division, you're going to need more than three mags. And since all magazines have to be behind the hip, if you start clamping on dual mag pouch after dual mag pouch, you're going to run out of real estate pretty quickly. (Unless you're built like Haystack Calhoun or Andre the Giant, in which case you have other problems.) Blade-Tech makes

the thing

: a stacked quad carrier. Instead of four mags one after the other, it is two on top of two. Your only problem is teaching yourself to reach back and grab just one for the reload, a simple thing you can do in an afternoon of practice. Uncle Mikes makes a kydex holster that conforms to the Uncle Mikes imperative and tradition: it sells for not much money. At the moment you can get an entirely suitable high-ride straight drop Uncle Mikes holster made of kydex for your 1911 for less than \$20. Don't go telling me that shooting costs too much. Not when you can be ready to go with belt, holster and mag pouches for enough less than \$100 to pay your match entry fee. Why spend more for a Blade-Tech, Cen-Dex or Talon, when you can get an Uncle Mike's for change back from your twenty? Variety. If all you want a straight drop high-ride, Uncle Mikes has it. (They'll probably have more before I get around to updating this chapter in a few years.) What they can't do is custom-make a holster for you, your 1911, and your needs. For that you go custom.



The new Blackhawk Serpa-lock holsters show great promise. Once I've tried to wear one out I'll be able to tell you more.

Blackhawk, the makers of so many things tactical nylon, make synthetic holsters. Their Serpa and Serpa-lock holsters show great promise. The Serpa-lock uses a trigger-finger activated lock that retains your 1911 in place until you unlock it as part of the drawstroke.

A kydex holster that I can wear, which rides high and doesn't kill me, is the G-Code. It comes as a belt loop or a paddle, and the holster has a built-in safety guard. It keeps your safety from getting tangled up with your shirt.



The Serpa lock is unlocked with your trigger finger.



Need a bunch of magazines? Blade-Tech quad pouch is the answer. At least for those who want magazines forward, and not by their kidneys.

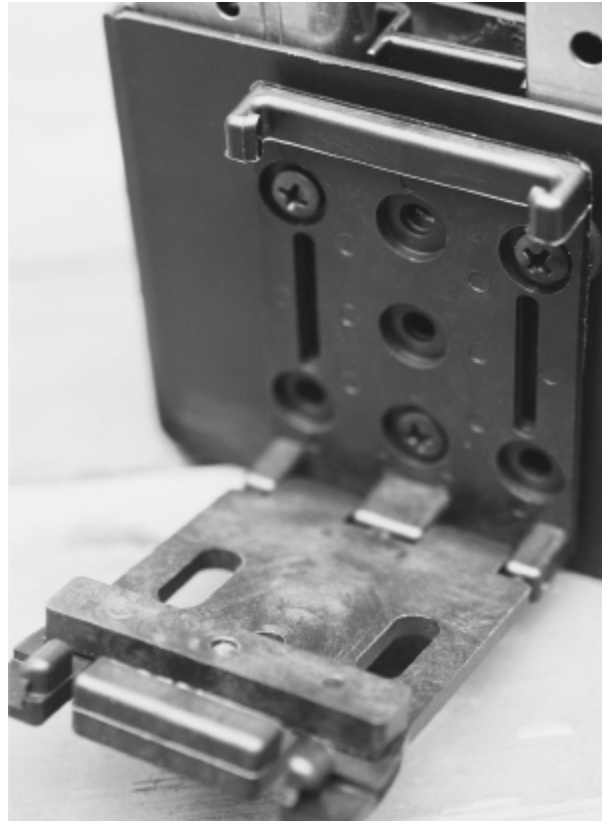


The tek-lok from Blade-Tech. Squeeze the sidebars and swing the panel down.



Uncle Mike's makes a plain, straight-drop holster made of kydex that works in a number of applications. You can't beat the price, and it is hell for tough.

Speaking of belt attachments, one problem we always have is in getting the holster secured to the belt, in the right place, without the whole thing turning into an undignified wrestling match. Enter the Blade-Tech teklok. The teklok is a hinged latch that clamps around your belt. The lock bolts to the holster body (Blade-tech holsters, unless you modify some other brand) and then you swing the hinge shut to clamp the lock around the belt. If you want the lock to be even more secure, insert the locking block. It prevents the two halves of the latch from squeezing in and unlocking the lock. To get the assembly off once you've gotten it together you have to take your trousers off. Wrestling the lock block out, then the clamp open and the holster off is not something you can do while wearing it. Hey, if you want security, you have to give up a bit of convenience. Me, I've always thought the "convenience" of a paddle is over-rated.



With the clamp open, put it around your belt and snap it shut.



To lock the tek-lok, insert the locking bar to prevent the sidebars from squeezing in.

In addition to durability, synthetics also have long-term survival and adaptability in their favor. Were I going off to Iraq, I would have no problem using a can of beige spray-paint to alter the color of my kydex holsters. Leather, on the other hand, would never be treated so harshly.

Leather

Leather for the longest time was what holsters were made of. I still remember the outrage in the early 1980s when we started seeing holsters made of synthetics. Old-timers couldn't get over it. Well, we did, and they did. However, leather has a lot going for it. First are looks. Nothing synthetic is as good-looking as leather. You want leather, there are a lot of makers, but a few designs. Holsters designed for and made of leather have to keep in mind the restrictions leather has. A kydex holster can have the friction retention built or moulded in. A leather holster needs some sort of friction device, usually a rubber-edged clamping screw. Leather has to be protected from mold, mildew and periodically washed to clean off grit, dust and sweat.

But leather is cool. One cool holster is the Galco training holster, also known as the Gunsite holster. At Gunsite students need durable holsters that hold their handguns securely without a whole lot of safety straps, latches or "security" features. The idea is to teach you how to shoot and deal with problems, not drill you on every security holster ever made. If you want to use a level 2 or 3 security holster, great. Bring it and use it. But if you're more interested in the shooting problem (and can deal with holster issues back home during draw-and-dry-fire practice) then all you need is a secure and durable holster. Thus the Galco Gunsite holster.

For CCW, it is hard to beat the classic Summer Special. Designed decades ago by (as I recall) the late Bruce Nelson, it has been copied by almost every holster maker since then. Mine was made by Gordon Davis back in the early 1980s. It is an in-the-pants (or IWB in the trade) and uses a steel liner to keep the holster open for re-holstering. It is not secure against grab attempts, but is secure enough for vigorous activity. How

vigorous? I wore it through four trips to Gunsite. It stayed put. I was even wearing it the day I got hit by a car. For concealed carry it is hard to beat.

Nylon

Actually, Cordura. I should be using the trademark logo, or the copyright logo, or something, as Cordura is a name brand. A tough, woven synthetic with amazing abrasion and load-bearing properties, it is what we make things out of now that we don't use cotton webbing. Basically, a tactical thigh rig, as the belt is now so full on many military and law enforcement teams that the only place left is down in the old "gunslinger" location. Ironical, isn't it? We passed a rule in practical shooting to get away from the old gunslinger rigs because they "weren't practical" and now the military and police (who would have nothing to do with us in the old days) are now using lots and lots of tactical thigh rigs. If you want the best, I can point you to two sources; Blackhawk, and London Bridge Trading Company. Both make holsters, and Blackhawk is the winner when it comes to variety and options. I've used both, and been very happy with both.

A London Bridge holster I have is designed for a 1911 with a light mounted. The holster itself is quite rectangular (as you'd expect) and while it works with a 1911 lacking a light, the pistol swims around in the holster. With a light in place, you'll find the fit is a lot better.

The latest from Blackhawk is their tactical thigh rig with an insert. Using a stiff plastic (kydex for all I know) inside the holster, they have the utility of the nylon rig, and the friction retention of the kydex. If you need to re-holster to do something (like slap the cuffs on someone, climb a ladder or work at a computer) you can simply stuff your 1911 back in the holster, and when you hear the click you know it is locked in. The friction retention isn't good enough to hold it against really hard activity, say, jumping out of a perfectly good aircraft. But your 1911 will stay holstered through all the running, jumping and crawling you can do.

If you're looking for a non-tactical, non-thigh holster, Uncle Mike's is the originator of the soft, synthetic holster. You can get more holster for real-world use, for less money, from Uncle Mike's, than you can anywhere else.



The Blackhawk inner shell locks your 1911 in place, even running, jumping, or in this case, holding it upside down and shaking it.



The London Bridge Trading Company light-mount holster. Room in there for a 1911 with the light attached.



The kydex insert to retain your 1911 in its Blackhawk holster.

If kydex is so durable, then why have a cordura/nylon holster? Noise. A kydex holster has a definite, hard, “plasticity” noise when it rubs against something. You can sneak through brush relatively quietly with a fabric holster, where covered in kydex you’d be easy to track. Just follow the clicks, rasps and clunks made by your kydex whacking against everything. Now some of us are a lot quieter in the woods than others. Back in my bowhunting days I could have snuck through the woods festooned in kydex, with change in my pockets and jangling metal gear hanging on me, and you would not have heard anything. But some people can’t walk quietly across a shag rug in their slippers. For them a cordura/nylon holster offers a degree of quiet they can’t get with other gear.

Which to get? If you’re anything like me you’ll end up with boxes full of holsters, a style for every occasion, a few mistakes, and some old favorites that you can’t let go of.

Chapter 9

The Defensive 1911

We should include the duty 1911 as well. The 1911 is seeing a resurgence of popularity in law enforcement circles as well as in the military. However, it has been gone so long from so many places that many departments are finding themselves re-inventing the wheel. And those who wish to carry a 1911 for defense often find themselves wading through endless web pages offering “advice” on what you need. In many cases, the person offering the advice has something to sell (which is usually tops on the list of “must have” items mentioned) and little experience building, fixing, shooting or carrying the 1911.

For those who haven’t pieced together my resume from the other titles I’ve written, I’ll give you the short-short version: (The “short” version would take too long. The long version will be my 1911 Gunsmithing volume.) I started shooting and carrying a 1911 in 1977. I was working at a gun shop, and bought an Ithaca-made WWII surplus government model for the magnificent sum of \$179 and tax. I carried that gun (still have it) both box-stock and as a “custom IPSC gun” built by a gunsmith now long dead, Frank Paris. Frank was a great guy, and had learned many things building bull’s-eye guns for decades, but IPSC was new. I broke a few things on that gun, and had to have him replace some, and I replaced some myself. I shot in several US Nationals before I ever got to Second Chance. At Second Chance, I experimented on, shot with, won, traded, bought, sold and broke in excess of four dozen 1911s in various calibers. I was doing much the same while shooting IPSC matches, the Steel Challenge, The Masters and a host of local and area matches. I picked up a Lightweight Commander, and carried it daily for 15 years. That gun went with me to Gunsite four times. I became a state-certified Law Enforcement Firearms Instructor, a court-certified Expert Witness, all while carrying one or another 1911. I finally decided to give up gunsmithing for a living and get into writing, “where the real money is.” (Others who write for books and magazines on things

firearm-related are howling with laughter at this point.) I've experimented various 1911s into scrap. I've hot-rodged them, done a number of abusive, even destructive, tests to them, and made 1911s that fired calibers you may have heard of but never seen, and calibers you've never heard of.



The difference between the Sig GSR and the Armscor Rock Island Armory is big in price. Not so big in accuracy. Nothing in reliability. And internal vs. external extractor? Nothing at all.

While discussing who should be using what, things may get a bit clumsy. I'm not too keen on using the term "civilian" to describe a non-law-enforcement person who is legally carrying a gun. I know a lot of police do, but it isn't correct. As I mentioned in the first chapter, words mean things. A civilian is a citizen of the United States who is not a member of the armed forces. Taxpayers and police are civilians, even though some police officers like to differentiate themselves from the rest of us by using the word "civilian" for non-LEO. That's right, you, me, the NYPD Detective and the FBI agent standing over there are all civilians. So is the guy from the National Guard, except when he is on active duty. It has to do with being subject to the military courts for disciplinary action. I use "CCW"

simply because it was the first acronym I ever heard to refer to a legal armed citizen. Concealed Carry, Weapon. Some States refer to the permit/license as a CPP; Concealed Pistol Permit. And there are more, I'm sure. But mostly I'll use CCW to refer to the citizen who has gone through the hoops, training, background check and daily hassle of legally carrying a concealed pistol. In this case, a 1911.



You may need a handgun because it is all you have. And you may need a handgun because your main gun is broken. This broken bolt hold-open lever on an AR stopped things in the middle of an AR class. Good thing it wasn't on the street at that moment.

To begin the exercise, I will propose that I am in the position of Departmental Armorer and Training Officer. (Not too far-fetched, as I have

been the armorer to several departments, and am a state-certified Law Enforcement Firearms Instructor.) I get to decide what the department buys, approves, accepts as suitable modifications, and what is denied. As part of the exercise, I'll explain why. All selections and modifications will be graded on their utility, expense, durability, and potential for problems. What you will find is that many modifications competition shooters make are not suited for duty or defensive use. However, the mere fact that something is ubiquitous in competition does not mean it is automatically a bad thing for street use.

Size, Caliber and Ammunition

Starting out we find one of the few difference between a departmental duty gun, and a civilian concealed carry piece. The duty gun will be a Government model, with 5-inch barrel and full-size, steel frame. No alloys, no polymers, and no hi-capacity frames. Everyone gets a gun pretty much as John Moses Browning and the War Department in 1911 designed it. However, for a concealed carry piece for those of us not also carrying a badge, a lightweight 1911 in a size shorter. The department has to keep track of spare parts, magazines, holsters, mag pouches, and train everyone on the system. Just to keep us from all going crazy, and to streamline training, the standard is just that; the same for all. A non-sworn person carrying has only his own guns, magazines, training and spares to keep track of, so a non-standard gun is not a problem. As long as your non-standard parts or requirements are common enough to be available. A police department has to be able to count on a ready supply of ammunition, even if it means buying a case of ammo from the Wal-Mart. The Chief is not going to be pleased that the state-mandated qualification course has had to be re-scheduled yet again, due to a shortage of "47 caliber Magnum-superNinja" ammo for which the departmental weapons are chambered.

Thus, departmental weapons will be in .45 ACP. Practice, training, and instruction will be done with 230-grain hardball purchased from the lowest-bid American-made source. Carry ammunition will be issued, with officers able to choose from two or three different 230-grain jacketed hollow-point brands. If an officer feels that his weapon shoots more accurately, or he prefers one to another, he can use it. All weapons will be tested, and

recorded as reliable with all three. Any weapon not reliable with all three selected departmental duty ammunitions choices will either be returned to the factory for repair, or sent to the departmental armorer or contract gunsmith for service. The officer will qualify with what he or she prefers to carry.



The departmental 1911s would be in .45 unless there was a compelling reason.

Those of you not in a department can pick what you want. However, be aware that if you get too far off the beaten path the going may be tough. I have a 1911 I built, chambered in .40 Super. It is a great gun. However, the only source of ammo was the Triton ammunition company, now out of business. When the last of my supply of .40 Super brass is exhausted, I'll have to rebuild it, probably as another .45 ACP. So if you want, desire, even

Just to have your carry gun in an exotic caliber, be aware that exotic calibers, like exotic plants, do not always do well in difficult climates. My suggestion for the non-sworn CCW holder is that you stick with one of the following: .45 ACP, .400 Cor-bon, 10mm, .40 S&W, .38 Super or 9mm. All are readily available. Only the .400 Cor-bon is a proprietary caliber, and I don't see Cor-bon folding their doors anytime soon. All are available loaded with expanding bullets.



The 10mm and .40 are excellent rounds. But for my department, it will be a .45 or prove you need a 9mm.

A carry or duty firearm must be fed expanding ammunition. Yes, we've all heard "they all fall to hardball" but it isn't true. Yes, .45 hardball (230 grain full metal jacket) works better than any other hardball, but a good JHP (and no one makes a bad one today) works even better. And you do not

have the problem of over-penetration. I used to discount worries about over-penetration as overwrought. After all, since many shooters (police, civilians, bad guys) miss in shootouts, the chance of an over-penetrating bullet causing further problems seemed small. With only 20% hits, why worry over the exiting hits, when the other 80% are traveling past the bad guy with a full head of steam? But the problems are not just to people downrange. Statistically, a person shot with hardball vs. an expanding bullet requires more hits, and more time after being hit, to cease their nefarious activities. It does you little good to shoot a miscreant, and have as his last act be to shoot you with his own firearm. I'd feel pretty silly explaining things to the staff at the pearly gates. "I did everything right, but the S.O.B. got me with his .25 just before he expired." (Probably with said S.O.B. standing ahead of me in line.) It would be worse if the gate attendants told me that an expanding bullet would have stopped the fight a second sooner, the second in which he had the time to shoot me. More shots fired means more potential misses, too.



If a short-statured officer can't shoot a qualifying score with a .45, they get a 9mm like this Les Baer and work up to +P ammo.

So, we have a police officer on duty with a .45 Government model, and a civilian (and maybe even the off-duty or plainclothes officer) packing a LWC in .45. Is there any situation where I might be a bit flexible? Yes. If a department has "short-statured officers." Usually that is doublespeak for women. But I've seen male officers in training classes as short as many women. One class had a male officer who was not much more than 5 feet tall. If repeated attempts in marksmanship training prove that the officer simply cannot qualify with a full-size gun, or a close inspection shows that the length of the Government model pokes into the seat of patrol cars when he or she is seated, then we issue a Commander. A steelframed Commander. And in extreme cases, that Commander is chambered in 9mm. I'm sure someone is snorting at this point. "Why, if they can't handle a man's gun for a man's job, they shouldn't be wearing a badge." Thank you, Mr. Neanderthal. The Courts disagree. The legal phraseology is "Disparate Impact." If the tools the department has selected are such that an otherwise-qualified candidate or officer is unable to meet performance standards, then the tool must be changed.



Detectives, and smaller officers whose holsters won't fit the squad cars with a government model, carry commanders in .45. This Dan Wesson/CZ is perfect for the job.

The way I phrased it when the subject last came up was this: "Your officer was smart enough to get through the academy and pass the State test. He or she is clever enough to find the bad guys, and tough enough to effect an arrest. He or she is persistent enough to see the case through the courts. And you want to give them grief because they use a caliber that isn't 'manly' enough for you?"

An extreme example, but an instructive one: Suppose your department only allows issue uniforms. And only issues uniforms in blouse sizes 42 Regular, and trousers with 32-inch waistbands and 34-inch inseams. Officers with sloppy or altered uniforms will be given demerits, and enough demerits call for dismissal. If you decide on such a policy, you'd better tell the City Attorney beforehand, as he'll be getting phone calls five minutes after that policy is posted. Yes, it is a silly policy, but so is telling an officer who is five feet tall that "this is the gun, if you can't use it, too bad." If you

think you can make it stick, please call the FBI. They found out over twenty years ago that the Courts have no sense of humor about disparate impact of equipment, and were made to change. You will too.

So, for the women officers who can't handle a 5" .45, we have to have a weapon that does not cause a disparate impact. No problem. They get steel-frame Commanders in 9mm. They begin the transition training with 115-grain hardball. Once up to speed, they then transition to departmentally-approved and issued JHP's, either 124+P or 147+P ammunition. In extreme cases where the officer's hand is very small, the departmental armorer fits the weapons with slimline grips from Chip McCormick, and a Gunsite low-grip thumb safety. They are now able to carry, pass the qual course, and no one has any question that the ammo they carry is "second rate" or sub-standard. Someone might ask, if the 9mm+P is good enough, why not allow everyone the choice? My take is that those who want to carry a 1911 do so to a great extent because they want the .45 ACP. And the .45 does work better than the 9. Few want the bulk and weight of the Government model, just so they can have a bit easier time qualifying with 9mm or .38 Super ammunition. However, if your petite officer lights up a miscreant, and he drops like Comet Kohoutek when she hits him with a 9mm+P round, expect other officers to begin requesting 9mm 1911 sidearms.

Triggers and trigger pulls

First off, light is out. You do not want (nor would my fictional department allow) a trigger pull less than four and a half pounds. A clean, crisp five-pound pull is a lot lighter in feel than many people would think. A light pull is not just an accidental discharge waiting to happen, it is also a durability issue. The sear notches on a hammer that allow for a clean, crisp 4.5 to 5# pull need to be on the order of .018" to .020" tall. As chunks of steel go, that is large enough for a lifetime of wear. To get the competition pulls you read about, the Grandmasters with one and half pounds of trigger pull, you have to working either with notches of .010", or greatly reduced mainsprings. Neither will last. Yes, the Grandmaster gets twenty thousand rounds a year out of his gun and trigger parts. But he cleans it regularly, weighs the trigger on a regular basis, and if anything feels the slightest bit remiss, has no hesitation in dropping it off at his gunsmith for a "tune-up."

(And probably has two or three pistols in rotation, between a practice gun, a match gun and an “off to the gunsmith” gun.)



No light triggers. Besides the problem of holding suspects at gunpoint, who wants to ride in the SWAT van next to this vest wearer, knowing the trigger is light?

Departmental guns won't get that kind of treatment. And the department can't afford three guns per officer. The mainsprings will remain full-strength, to ensure the weapon will fire when the trigger is pulled. Carry your gun concealed long enough, and sooner or later you'll pluck your very own "1911 dust bunny" from the firing pin slot in the rear of the slide. A defensive weapon must always go off when needed, and never when not.

All duty weapons will have full-strength mainsprings, full-height hammer notches, and full-pull trigger weights. Your carry 1911 should have the same. As part of the annual departmental inspection, the hammers will be checked to make sure they have intact and operating half-cock "safety"

notches. The notch is there to catch a hammer that for whatever reason jars off the sear. Dropping to half-cock prevents an inadvertent discharge.

The triggers themselves should not have an over-travel screw in them. If they do, then the screw must be both staked and hosed with thread-locking compound. The trigger must not be adjusted for “no overtravel.” There must be noticeable but not excessive overtravel, so grit, dust, mud or other debris won’t keep the weapon from firing when needed.

Only the tallest officers, with huge hands, need long triggers. Unless your glove size is XL or larger, you use a standard trigger. Long triggers are for big shooters, and only when their hands are large enough they can avoid “leaning” the trigger. If you use a trigger that is too long, your trigger finger can’t contact the trigger on the front, but only from the side. Pressing the trigger sideways throws shots out of the group left for right-handed shooters, and right for left-handed shooters.

No trigger shoes. Period. A trigger shoe widens the trigger, making it more likely to catch on the holster, hands, and any object that is not intended to press the trigger but which can. An excessively wide trigger is asking for problems, and the (unfortunately fictional) department regs will not allow a Cold Gold Cup as a duty or off-duty carry weapon. I’ve disallowed wide triggers made that way with add-on trigger shoes. I can’t then defend the use of a wide-trigger Gold Cup.

Safety, thumb

The thumb safety should be large enough to be easily used as a safety, but not so large it can get caught on a shirt, jacket or web gear. And it must be positively detented. A too-large safety is great for competition, but lousy for defense. First, a safety that is too large is an invitation to be wiped off. Simply brushing against you, your clothing or web gear can brush off a safety that is too large. Too small, and a safety becomes difficult to use under stress. The old “tab” safeties that used to come on the 1911 and 1911A1s are too small. The “just right” size is right in the size of the Wilson, old Swensen, and the Chip McCormick safeties. The one advantage to a too-large safety is that it can be trimmed. A competent gunsmith can blend a too-large competition safety until it is the right size. However, in

my department, only the departmental armorer or a departmentally approved gunsmith would be permitted to make any changes, and they would have clear instructions as to how large was “large enough.”

The thumb safety must clearly click up and down. It must not be “mushy” or at all unclear as to its condition. There can be no in-between state; it must click either up to safe or down to fire. And the amount of force to change it must be noticeable. Not objectionable, but it must clearly take an intentional act. Under stress, you won’t notice how much force it takes to push your safety off. I have even seen 1911s adjusted so it takes two hands to push the safety back to “Safe.” The idea is simple: you need to get it off safe quickly. But there are no time constraints on getting it back to “Safe.” How much is enough for pushing it to Fire? As long as it requires a conscious effort, makes an audible click, and does not get brushed off while wearing it, it has enough.



No big speed/competition safeties. Departmental size would be stated in regulations.

What about ambidextrous? Departmental weapons would have ambisafeties, but the right-side paddle would be reduced in size. Many competition shooters use standard safeties. In the old days, we all “had to have” ambisafeties. But in the old days, we’d do crazy things like draw weak-hand-only to shoot weak-hand-only. Guys would be reaching around behind themselves with their off hand, to draw and shoot. Or they would be reaching across their chest, drawing the gun upside down, and then plastering it against their chest to shift their grip. I guess in an emergency that would be OK. But in a competition? I shudder at some of the things we did “back then.”

However, the whole point of a sidearm for a police officer is he or she will have it when he or she needs to shoot people. (Bad people, trying to do bad things, lest you forget.) Sometimes the start signal is the bad guy shooting the officer. Given that, it is entirely within the realm of possibility that an officer may have to shoot weak-hand only. (Or “off-hand” or “other-hand” or whatever you want to call it.) An ambisafety is a prudent option.

For the CCW holder, you’ll have to decide for yourself. Me, I don’t worry. I can get the safety off without a problem using my left-hand trigger finger. Ambis don’t fit my shooting style (my index finger knuckle bangs against most of the designs extant) and so I pass on them. However, if it comes to pass that I needed one, could have used one, didn’t have it and ended up on boot hill as a result, feel free to say “I told you so.” On this matter I have to tell everyone outside of my fictional little department to “Do what you think is right.”

Safety, grip

The trend has been for higher safeties, to get your hand higher on the gun. The drawback is that the higher you go, the less leverage your hand has to depress the safety and allow it to fire. On departmental weapons, all grip safeties will be active. And work. We used to pin or otherwise deactivate the grip safety for competition. In the days before “speed bump” safeties, it was necessary. Now, with improved safeties it isn’t. What is needed is a safety with a speed bump, or the Kimber/McCormick “spine” on the safety. And, the safety must be set for “one-third” activation. The

grip safety must be depressed to clear the trigger bow. A proper safety clears the bow once it has pivoted the first third of its travel. I have seen pistols where the grip safety had to travel more than two-thirds of its arc before it cleared the trigger bow. If you shifted your grip even slightly, it prevented firing. The purpose of the grip safety is to keep the trigger from moving when your hand was not on the gun. Once you've grabbed it for the draw, the grip safety should no longer preclude firing.



No custom guns, or guns with pinned or de-activated grip safeties would be allowed. I admire the skill of the gunsmith, but a lot of the stuff on this gun veers into mall ninja territory.

The departmental armorer would inspect and tune if needed, any 1911 that required more than a one-third movement.

What about the CCW holder? I'd advise the same thing. You should have a grip safety that works. But it should not require a particular, viselike grip to get the pistol to fire.

Additional Safeties

I'm not keen on any firing pin block. The ones I've seen have not impressed me. The Colt Series 80 system uses a pair of levers working off of the trigger bow. The levers press a plunger out of the path of the firing pin, allowing it to reach the primer. The problem is, if the levers are assembled incorrectly, the pistol won't fire. It will seem to work normally until you go to shoot it, when primers fail to detonate. Some also object to what the levers do to the trigger pull, but I haven't seen that as a problem. The Kimber system uses the grip safety to press the same kind of plunger. However, there the problem is timing. It is possible for the grip safety to clear the trigger bow and allow the trigger to move and drop the hammer, but the grip safety has not yet pushed the plunger far enough to clear the firing pin.

If it is possible, the system should be timed so the firing pin clears before the grip safety does. However, that may not be possible and still have the grip safety properly timed to the "one-third" standard.

Departmental weapons will not have a passive firing pin block. What about inadvertent discharge due to dropping? The dreaded "I shot through the floor" syndrome? From my testing, overblown. The test procedures are in Chapter Twelve. The summary is; it takes a fall of more than 8 feet to have a chance of inadvertent discharge. And the impact has to be directly onto the muzzle. To reduce even the chance of such an incident, departmental weapons will have lightweight, titanium firing pins, with heavy-weight firing pin return springs. The full-power mainspring will have no problem accelerating the light pin, and its reduced inertial potential would mean an even higher height to impact before there was even a chance of ID.

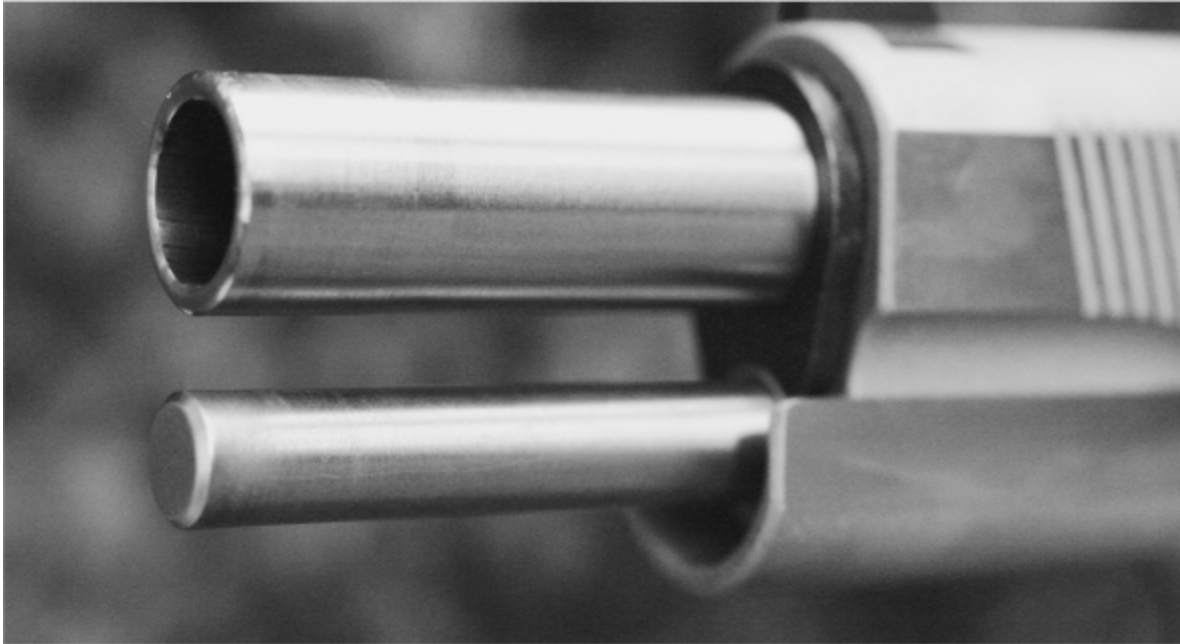
What should you, the CCW holder do? If you already have a Series 80, don't take the parts out. Find a good gunsmith who can properly adjust the system for function, and make sure you know how to assemble it. And when you do, perform the pencil test. For the 1911, the pencil test (there are other tests in which one uses a pencil, not for use here) you make double-y sure your newly assembled 1911 is unloaded. Drop an unsharpened pencil (wood, not mechanical) down the muzzle, eraser first. Dry fire. If you put

the Series 80 system back together properly, you'll launch the pencil. If it is sharp, it will stick in the ceiling tiles. If it is not assembled correctly, the pencil will sit still in the barrel, mocking you.

Bushing and barrel

Standard bushing, no guide rod, standard barrel. The coned barrels common in competition offer competitive advantages. They reduce (marginally) felt recoil. They speed up (again, marginally) the cyclic rate of the pistol. The cost is large: you must have the slide machined for a reverse recoil spring retainer, you must use a full-length recoil spring guide rod, and you need something extra to disassemble it; a paper clip, tool or gizmo. A standard bushing, properly fitted, needs only your bare hands.

A full-length guide rod impairs manipulation of the pistol. Not just the old-fashioned "press check" where you hooked your thumb in the trigger guard and used your left-hand index finger to press the muzzle back, but in emergency use. The old press check is a tad hazardous for some shooters tastes. After all, you're sticking your thumb into the trigger guard while the safety is off. (and getting your other hand awfully close to the muzzle.) The new press check is preferred; there you brace the heel of your left hand against your right hand fingers on the grip, and from underneath use thumb and fingers to press the muzzle back. Yes, that is what those forward serrations are for.



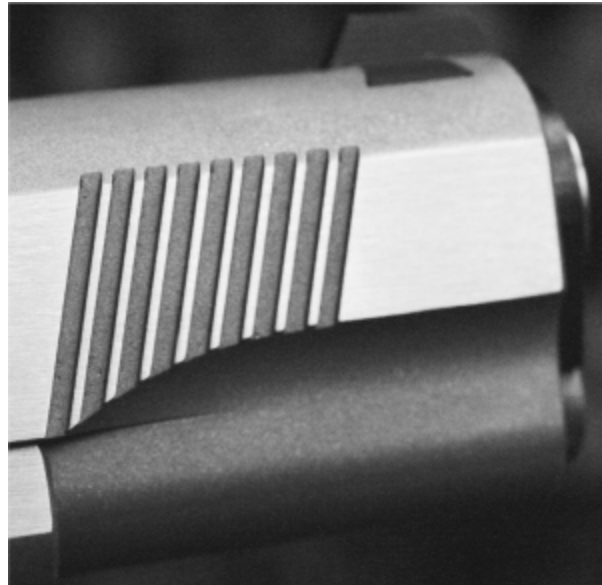
No full-length guide rods.



Barrels and bushings would be standard.

In an emergency you can press the edge of the slide against an object to one-handed chamber a round. Or you can clear a wedged round out of the chamber. Full-length recoil rods preclude those operations. The “advantage” of the rod is to prevent kinking and binding of the recoil spring. I’ve shot springs to death, and haven’t seen flat spots on them. Nor

do they come out kinked. It does add weight up front, an advantage in competition. The mercury-filled rods do aid recoil, but I would not approve their use in a duty weapon. Departmental weapons will have the original recoil system and no buffers either. The recoil springs themselves will be departmental-issue Wolff or ISMI 18.5 pound springs. Recoil springs will be changed on scheduled 2,500 round intervals.



Forward cocking serrations are for the new press-check.

A standard barrel is one of the old style, not the new integral-ramp style. The advantage they offer is in competition, for use with .38 Super and .40 S&W guns. The extra support the ramp offers the case allows hotter loads with a margin of safety. Since departmental weapons are all .45 ACP, the ramp isn't needed. Ramped barrels cost more than standard, and once a frame is machined for a ramped barrel that is the barrel style is it stuck with for all time.

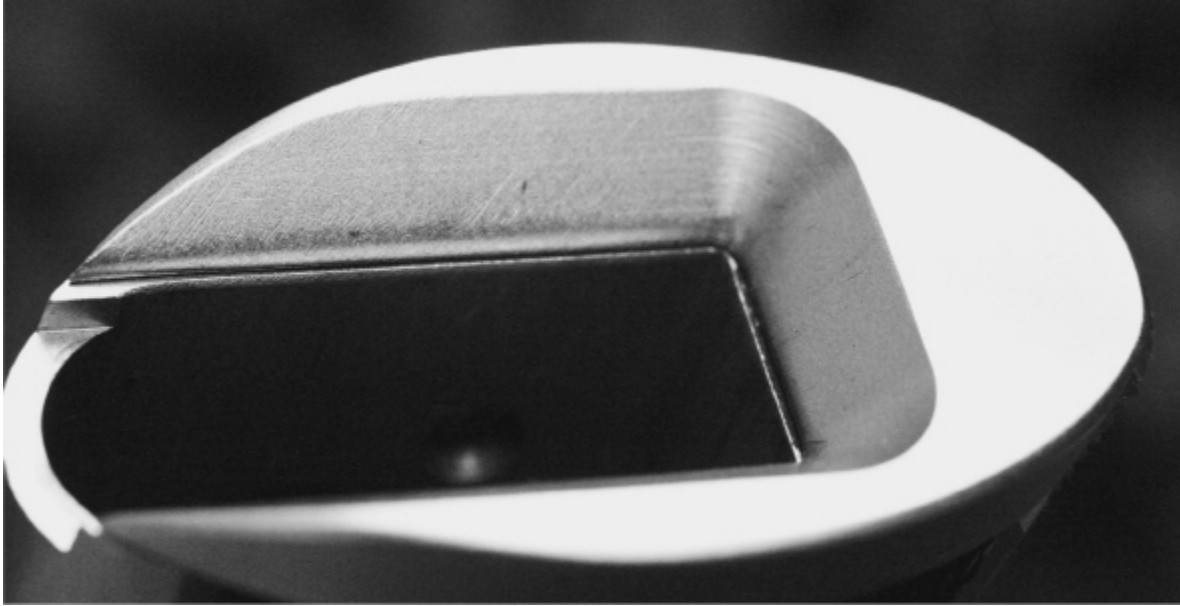
CCW holders, do what you want. One case I could see for a ramped barrel would be in a 9mm lightweight, fed a steady diet of +P or +P+ ammo. Since a lot of practice ammo will be reloaded ammunition (have you priced factory +P or +P+ ammo lately?) the brass may from time to time be a bit tired. A blown case in a steel-framed gun isn't too messy. Usually the only damage is to the grips and the magazine. Aluminum or titanium-framed guns don't stand up as well. And loading 9mm brass that has been

used for +P or +P+ loads is loading brass that has been worked hard. A ramped barrel greatly reduces the likelihood of a blown case, and decreases the damage if one “lets go.” My own lightweight 9mm carry gun is built with a ramped barrel, as I expect it to see nothing but +P+ ammo, and +P ammo and reload equivalents.

Magazine funnels

Nothing speeds a reload faster than a funnel. (Well, hundreds of hours of practice might, but if you neglect practice, the skill is gone. The funnel is always there.) But which one? The earliest one I recall is the positively ancient Wilson plastic one. It used a pair of flat hooks to latch onto the lower grip panel bushings and was held in place by the grips clamping down on the hooks. The plastic soon broke, and we all ended up with one or both sides of the funnel attached to the frame with super-glue. Department-approved or issued mag funnels will only be those using the mainspring housing pin as an attachment method. Either something like (or the very one) S&A mag funnels, where the funnel is an integral part of the mainspring housing, or the Wilson or Clark, using the mainspring housing pin to attach the funnel. The Wilson uses an extension on the funnel that rests in slots in the mainspring housing, and the pin keeps it all together. The Clark uses a longer pin to hold the funnel, which attaches over your frame and mainspring housing.

For the department, I’ll mandate the S&A or the Wilson. Flat or arched, that is up to the officer it is issued to. CCW holders, who may not want to invest in a new mainspring housing as well as a funnel, the Clark will work very well. You can invest a lot of money in custom welded-on or welded up and recontoured frames as your magazine funnel. Such units when done well can be exemplary, and demonstrations of your gunsmiths skill. But such custom work costs. Rather than invest many hundreds of dollars in a hand-fitted and finished custom integral magazine well, I’d rather have a simpler unit properly fitted and the rest of the money put into practice ammo.



Low-profile magazine funnels would be approved. Huge competition ones would not.

A pistol with an added magazine well also adds to the length of the frame. (One reason a custom welded unit may be attractive.) All magazines in inventory must be long enough to pass flush with the magazine funnel. Which brings us to...

Magazines

All magazines in my department will be stainless, and made by Wilson, McCormick, Ed Brown, Novak or Cobra. There have been some who protest that the “modern” development (I first saw them twenty years ago) of eight-shot magazines is still too experimental, and thus unreliable. I don’t think so, and my department would issue eight-shot magazines. We would also buy a bale of replacement springs. Every magazine would be numbered with a unique identifier. Each officer would be issued five magazines, except for the tactical team members, who would get 10, five with each of two pistols. At the spring qualification shoot, all springs in duty weapons magazines would be changed for new ones, and the new springs used in the qualification session. All stored springs in departmental inventory would be left in the wrappers, in the vault. Old springs would be disposed of, so they would not be re-issued. (The department’s attorney would tell us if we

could sell them without exposing the department to liability problems. If they could be sold, we'd either offer them in a batch at auction, or sell them at a charity event to raise money for something like D.A.R.E. If not, they'd be torched.)



The department would issue magazines. They would be numbered. And they would be inspected annually.

All magazines will have a baseplate or bumper pad long enough to extend it past the magazine funnel. Using plain magazines with a mag funnel, you must use a fingertip or the end of your thumb to press the magazine the last half-inch to lock it in place. An extension makes reloading a lot easier and certain. The department would keep a replacement supply of basepads on hand. And pads that were found cracked or other wise damaged, at the spring qual, would be replaced.

The magazines are numbered, and which officer has which is recorded, so there is no doubt about which is which after a shooting. Not that I expect

officers to be fibbing about what went on, but since the magazines will be lying around the crime scene anyway, we might as well be in the position of getting all the info we can. Also, if an officer experiences a malfunction during training or qualification we can track which magazines were involved. If all happen with one mag, we can re-issue a fresh one. If the malfunction happens with various, then it is more likely a weapon problem, or an officer problem.

CCW holders, you want to mark your magazines so you can track malfunctions, and keep track of maintenance. The marked magazines will also be evidence, but that isn't your concern, just that of the evidence tech (who is most unlikely to look like Marge Helgenberger, by the way) photographing and collecting things.

Someone is no-doubt asking about this "annual spring change" thing. Do I really expect magazine springs to go bad in a year? No. I've only had magazines experience spring problems after about 10 years of hard continual use. And when they started to show signs of age, their only problem was that they failed to lock the pistol open when I ran out of ammo. Magazine springs, bought in bulk, aren't that expensive. If you're buying them a hundred at a time (or a thousand) you can get a real good price. Five springs, at \$7 each, is \$35. (That's the retail price. I'd bet a bid request for a thousand would bring the per-unit cost down quite a bit.) Considering that the ammunition expended, the officers and the supervisory personnel's time, and the overhead of the range for the department, \$35 for each officer each year is nothing. The confidence it brings is priceless. And, if nothing else, it ensures that every magazine will be stripped and cleaned, however cursorily by the departmental armorer, at least annually.



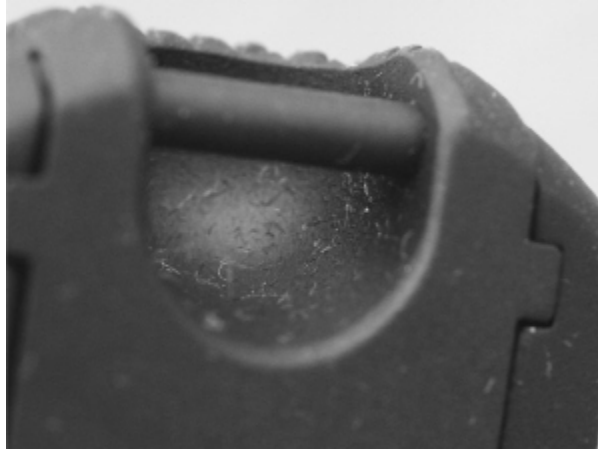
Patrol officers would have 1911s with lanyard loops, but no lanyard. SWAT officers would have the option.

What about 10-shot magazines? For most carry, they are too large. Even the smallest, the Wilson Bureaucrat, is longer than is convenient. One officer might get them: the shield man on an entry team. He'll get 10-round magazines for his tac gun, and pack a second gun on his entry vest. (The fastest reload is another loaded gun: The New York Reload.)

Lanyard loops

I'm of two minds on this one. Unless your department is the Royal Canadian Mounted Police, patrol officers are not going to be wearing lanyards with their pistols. On the other hand, the tac teams probably will be. Ken Hackathorn described the situation best: "After one operation, I walked back to the team vehicles, to find a neighborhood kid standing nearby. Pointing to the curb, he asked me 'Mister, is that your gun?' It was. After that, I used a lanyard." Busting down doors, chasing suspects,

wrestling with people who may be suspects, may be bystanders, and those who may just be too ornery to pay attention, anything not lashed to you can fall off.



Lanyard loops would be for SWAT officers. If patrol officers get issued 1911s with lanyard loops on them, they would not be required to use the loop.

Back when I was training heavily in the martial arts, we spent time learning to use common objects, and things people were carrying, as weapons. From that perspective, a lanyard looks an awful lot like a garrote. For a lone officer on patrol, the last thing you want is something an offender can strangle you with. If he gets your duty gun, grab your backup and deal with him. In a team setting, anyone who attempts to grab a team members weapon will be set upon by two, three, or four other officers, all intending to administer an impromptu lesson on the street cost of assaulting a police officer.

So, the departmental weapons will all have lanyard loops, even though not all officers will use them. But, instead of the old-style loops that stick down from the mainspring housing, I'd insist on flush loops. I first saw them on a gun built by Ned Christiansen, and since then have begun seeing them on other custom and semi-custom guns. The loop is recessed in the lower corner of the mainspring housing, and serves to attach the cord without being in the way.

CCW holders, you're on your own here. If you're packing someplace where you might be camping with a handgun, a lanyard can be useful. Ditto hikers, or those going into really, really bad places. But be aware that if you have to ditch the gun, a lanyard still works. That is, it keeps the gun on you. I'm thinking here not of ditching a gun you don't want to get caught with (I hope there is no one reading this with bad intent!) but rather of going overboard. The Marine Corps insists on all gear having quick-disconnect buckles for just that reason. It is bad enough falling or being knocked overboard. But to sink because you can't get your gear off or off quickly enough would really be bad. I read of one instance where a helicopter went into the drink. Once things stopped moving (Rule #3: You do not exit a helicopter which is entering the water until the blades have stopped.) he and all the others unclipped and bailed. The last thing he unclipped was his pistol lanyard, and it was a good thing he had a quick-disconnect, as the lanyard had gotten tangled with the chopper, and was going down. Had he not had a Q-D lanyard, he would have too.

If you live in the prairie, you need not worry much about that. But here in the Great Lakes region, there are more than 10,000 lakes large enough to drown in. And anyone on a coast or along a major river has the same problem.

Attaching a lanyard is easy. Get a section of 550 cord, also known as paracord. The 550 cord is made of two parts, a load-bearing core and a tougher sheath designed to resist abrasion. Take a section of cord 6 inches long or so and yank the core out of it. Take the sheath and pull it taut to take any slack out of it. Then tie a square knot to secure the lanyard to the lanyard loop. Trim the ends to less than an inch with a pair of scissors or a sharp knife. With a match or lighter, melt the ends until there is no excess. To remove the lanyard from the sidearm, cut the knot with a sharp knife.

Magazine releases

No longer, larger or wider than the original Colt factory buttons have been since 1911. Officers with thumbs too short to reach the button will be instructed on how to turn the gun, or use the left thumb to release the magazine.

Slide stop lever

Factory size, no extended levers, no ambidextrous levers (don't laugh, I've seen them) and all levers must be detented so they operate positively. The detenting is a simple dimpling to give the plunger a little purchase, and keeps the lever in place while cycling.

Ditto for CCW holders.

Extractors

The newest things in the 1911 universe are external extractors. Rather than the old leaf-spring extractor in a tunnel, the new ones are pivoted, using a coil spring, or use a new tunnel with a coil driving spring. Do they work? Yes. Do you need them? No. I would use whatever extractor system came on the weapons winning the bid, but I would not specify external extractors. The Marine Corps did not when they ordered new 1911s. Good extractors, set up properly, do not cause problems. And since departmental weapons are not going to see reloads, only factory-new ammo, the ammo isn't going to give any problems either.

Now, should the CCW holder go out and dump your new external-extractor gun? Not at all. As long as you've tested it and found that it works, use it. Should you seek one out on your next 1911 purchase? If you want. My opinion is that the whole thing is overblown, as the testing the Chapter Four showed. I was leaning towards externals only until Ned performed his test. Now, I'm happy with whatever works. The extractor test info is in Chapter Four, along with the other abusive testing.

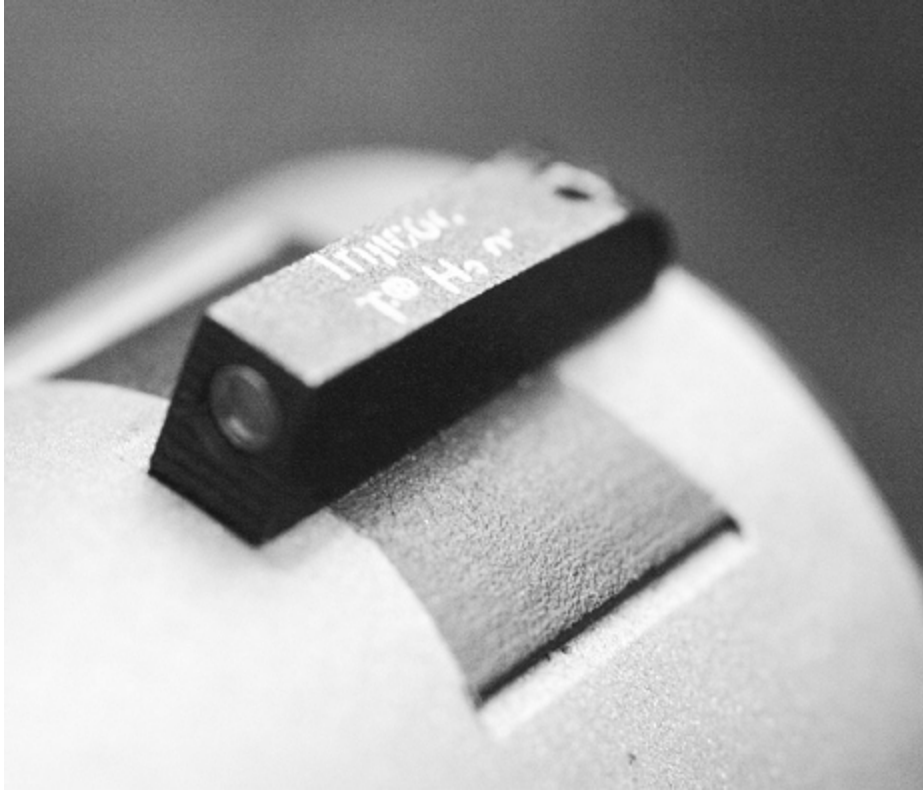
Sights

At the very least, departmental weapons will have sights like the last generation of old fixed sights. That is, a tall rear blade and a matching front blade. Better yet would be a pair of Novak sights, fitted in transverse dovetails. Personally I do not find three-dot sights any better than plain black. However, if a set of sights have the three dots it is easy to make them plain black. But if you have plain sights, it is much more difficult to make them three-dot. So the department would, if the budget precluded night

sights, order them three-dot. And officers would be permitted to blacken the dots with a felt tip pen if they so wished. However, the best choice would be Novaks with night sights. The departmental armorer would be issued a sight pusher to move the sights that required adjustment for zeroing. Night sights are reasonably durable, but adjusting sights with a ball-peen hammer and a brass rod is just asking to break sight capsules. Not that I'm worried about having to file EPA, NIOSH and NRC documents in the event my armorer breaks a sight capsule. But it does reduce the "three-dot night" sights to just two night dots. And would require a new sight, or return of the old for a new set of capsules.

All weapons would be zeroed at 25 yards for center of mass. Final adjustments for individual officers would be made at the first range session for familiarization and qualification.

What about adjustable sights? For competition, yes. For issue, no. One of the regulars on the Brians Enos forum, a site devoted to competition shooting, has as his identifier the line: "And you shall know him by the trail of dead sights." Just as my friend Jeff has broken extractor after extractor, Eric has broken every adjustable sight extant. It doesn't matter who made it, he's broken it. When it comes to sights, the fewer parts the better. So departmental sights would be fixed, adjustable by moving them in their dovetails, or replacing the front and rear with taller or shorter ones as needed.



Departmental 1911s would have night sights on them. This is a Novak-style front.

Rear sights would be fixed, night sight.



CCW holders, I'd suggest the same thing. Fixed night sights are the number one choice, followed by fixed three-dot, fixed plain, and last, adjustable.

Grips and non-slip treatments

The one concession to personal adornment and choice. Officers would be allowed to replace issue grips with any grips that worked for them, and did not:

- Have offensive, racist, sexist, salacious or suggestive words or images.

- Offer political opinions.

- Pose a manipulation, handling or reliability problem for the weapon or officer.

- Present an unprofessional image of the officer or department.

That means, for example, that if a particular officer had been in the Marine Corps, he (or she) could have a set of grips made (even ivory, if that is what he's always wanted) with the USMC initials, logo, or a Devil Dog. He could not have a scrimshawed image of a Marine offering the one-finger salute, or the Devil Dog acting amorously towards a voluptuous woman. He could not have the Devil Dog peeing on a political banner, name, or image.

He could not have grips with the name or initials of a political group, political action committee, or politician.

He could not have a set of grips so encrusted with gold inlay, jewels and carvings that getting it out of the holster and pushing off the safety made passing the qual course difficult.

As for unprofessional, tired, cracked, wood grips held on with several wrappings of electrical tape are a good example.

You may ask how I've complied such a list.

I've seen them all. Do you really want, as a CCW holder or serving police officer, to be in court, when opposing counsel holds up your sidearm with its offensive grips? The one with "Kill 'em all, let God sort 'em out" carved on the faux ivory grips? The one with the "hidden" KKK logos in the pattern, handed down from your great uncle of whom everyone spoke glowingly? The grips with the notches in the edge?

Grips are for gripping, and not for advertising.

Finishes

As departmental sidearms will be out in the rain, snow, sun, wind and occasional spilled coffee and dinner, the finish has to be durable. However, a durable finish is expensive. In the case of the department's 1911s, we're talking on the order of \$1,000 for each gun. Spending a couple of hundred more to ensure they keep working for a long time seems prudent. The issued weapons would thus be given one of the new high-tech baked-on coatings. Color? Black. I would consult with the manufacturer and see if we can add a layer of protection. The best would be if they could parkerize the weapons, and then apply the baked-on finish. If not, then we'd order baked-on black over stainless.

For the CCW holder, a durable finish is very useful. However, as the weapon would be concealed a lot more than a duty officers, lint and dust are more of a problem. A slick finish that needs little lube, and thus would be less likely to attract dust and lint, is preferred. Makers of the finishes know this, and they are all now quite good at working without lube.

Performance Standards

Each departmental weapon is expected to perform with less than one malfunction per thousand rounds fired. Malfunctions will be tracked in the qualification process, and any weapon failing will be replaced and tended to by the departmental armorer. If the cause is not obvious (a broken extractor would be a rare, but obvious problem) the officer would continue to use the newly issued weapon until the problem is found and resolved. Any weapon which fails the standard and cannot be resolved by the departmental armorer in the first year in the department's possession will be returned to the manufacturer for resolution.

Each will be fired for accuracy. All will fire the selected departmental ammunition to a group average less than 3 inches at 25 yards. If the performance of a particular firearm is doubtful, it will be fired in the Ransom rest for a total of five, five-shot groups. If the average is not less than 3 inches, and if any group is larger than 4 inches, it will be sent back to the manufacturer.

Carry ensemble

A sidearm by itself isn't much good. Even a sidearm that is loaded doesn't help you much if it is buried in a pocket or purse, under debris and the usual pocket and purse litter we all accumulate. You need a good holster, on a good belt, to carry your sidearm. A poor holster can fall off. (And no holster at all is simply asking for trouble.) A poor holster won't hold the gun securely. It may shift around, and not be where you expect when you go to draw. The holster may flop around. If you ever have to run while wearing it, you risk being beaten by your own sidearm. In addition to a holster, you need spare magazines. Someone might object, saying "I bought a hi-cap gun so I wouldn't need a spare mag. I have enough ammo."



If someone wants to install custom grips like these Spegal grips, great. But departmental regs wouldn't allow a whole lot of logos, mottos nor anything offensive. And I decide. (Hey, it's my department, right?)

Perhaps. Researchers have conducted various studies. The FBI has kept track of law enforcement firearms statistics for many years. Depending on who you read, the “average” gunfight takes less than 10 seconds, those involved fire three to five rounds, at a distance generally less than 7 yards. And the percentage of hits can be somewhere between 20 percent and 80 percent. And if you were to depend on the odds, you wouldn't pack a sidearm at all, as the vast majority of us will never be in, see, hear or know someone involved in a shootout. It would be ironic at the least to carry twice the “usual” ammunition consumed in a shootout, only to find yourself needing just one more round. And what if your one-and-only magazine fails to work properly? You're out of luck, that's what.

Officers in my department, carrying off-duty (a condition strongly recommended but not required) will be required when armed to be carrying two spare magazines, loaded.

Carry cases

Constant loading and unloading brings with it two problems: the top round, the one always being fed, gets beaten up. And constant handling increases the chances of an accidental discharge. The top round problem is simple: inspect the top round every time before you go to load. If it looks the least bit “weary” from multiple loadings, set it aside and use a fresh round. Once you have a few beaten rounds in your stash inspect them closely. If the bullet has been set back in the case, dispose of them safely. It may not be safe to shoot. A .45 set back probably is. After all, it starts at less than 17,000 PSI. Setting back the bullet, even if it is enough to increase pressure by half again as much, only brings it to the 25,500 PSI level, still well below what the 9mm and .40 S&W run at. However, if your 1911 is chambered in one of those (or 10mm) increasing pressure is not a good idea. Starting at 34,000 PSI, increasing them by only 25 percent brings the pressure to 42,500 PSI, a goodly amount past +P pressures.

The handling increases the chances of an accidental or negligent discharge. In law enforcement, the solution is simple: sand drums or used Kevlar vests. A sand drum at the entrance of the squad room allows officers to handle, load and unload firearms in relative safety. If they are pointing it in the drum and have an AD or ND, the bullet hits the sand and stops. (Of course the officer and everyone nearby will lose a few years off their hearing, but you can’t cover all the bases.) The used vest does the same thing. The important thing is to keep the muzzle safely directed.



When you carry, carry spare magazines.

Another tool is the Safe Direction Case from Safe Direction LLC. It is a handgun case lined with kevlar, for just this task. To load or unload you make sure you have the muzzle pressed against the center patch, and handle the 1911. In my fictional department every officer would be issued a Safe Direction Case. A discharge not striking the case would be cause for a reprimand and remedial training class. Striking the case would be a lesser reprimand and remedial class. In the event of a malfunction, the 1911 in question would be turned over to the departmental armorer or the department's on-call gunsmith for inspection. If the 1911 was indeed broken, then the officer's file jacket would get a letter of praise for following procedure and thus preventing a hazardous discharge of the broken weapon. For non-LEO CCW folks, a 30-gallon drum half-full of sand in the foyer just isn't what *House Beautiful* would cotton to. And the chances of coming across a used Kevlar vest cheap are nil. So go out and buy a Safe Direction Case and prevent holes in our car, house and person. There are worse things than being thought overly cautious. Like putting a

hole through your wife's favorite piece of furniture, the dog, the car, or even your wife.



If you carry, use something secure. The most expensive thing out there is a cheap holster. And when you can get inexpensive and good, like this Blade-Tech, jump on it. (Yes, I know that's a Hi Power I'm packing.)

Training

In my police department, the officers would have to meet the state-mandated training requirements simply to be considered for hiring. However, that would not be enough. Everyone authorized to carry (those with arrest powers) would be required to pass both the state course and the departmental (much tougher) course for marksmanship. There would also be annual tactical training, and the tactical teams would have monthly training sessions as well.

Which is all fine and dandy, but what are the readers who aren't police officers supposed to do? First, read. Second, get to an attorney. Third, get to classes.

Read everything you can on the subject of lethal force. You can't know too much, and you can use what you read in your defense. Both in Problem One (the bad guy) and Problem Two (the legal system) knowledge is power. Having read, you can then introduce your books as the basis for your decisions and equipment. There are many books, but the oldest (and the must-have in your library) are from Mas Ayoob. I don't get a kickback (wish I did) and Mas and I are competitors. We were competitors back when we were shooting, and we are now that we both write. (He's been at the writing a lot longer.) Get *In the Gravest Extreme*, *The Ayoob Files* and *The Truth About Self-Protection* at a minimum. Another book is one my friend Jeff Chudwin suggested: Jeff Gonzales' *Combative Fundamentals, an Unconventional Approach*. Armed with this knowledge, you'll be ready for your next step: your attorney. Consult the phone book and find an attorney who does criminal defense work. This attorney should be familiar with lethal force issues. This attorney should not feel carrying a sidearm is "icky" or "barbaric." Arrange a meeting, and pay for his time. You want him familiar with you, your background, your preparation, and ready to defend you should the need arise. Schedule annual meetings to update your file. Keep his business card with you. It should be in your wallet and in whatever you use to carry your CCW.



The Safe Direction carry case, with its Kevlar lining, is perfect for loading and unloading your CCW 1911.



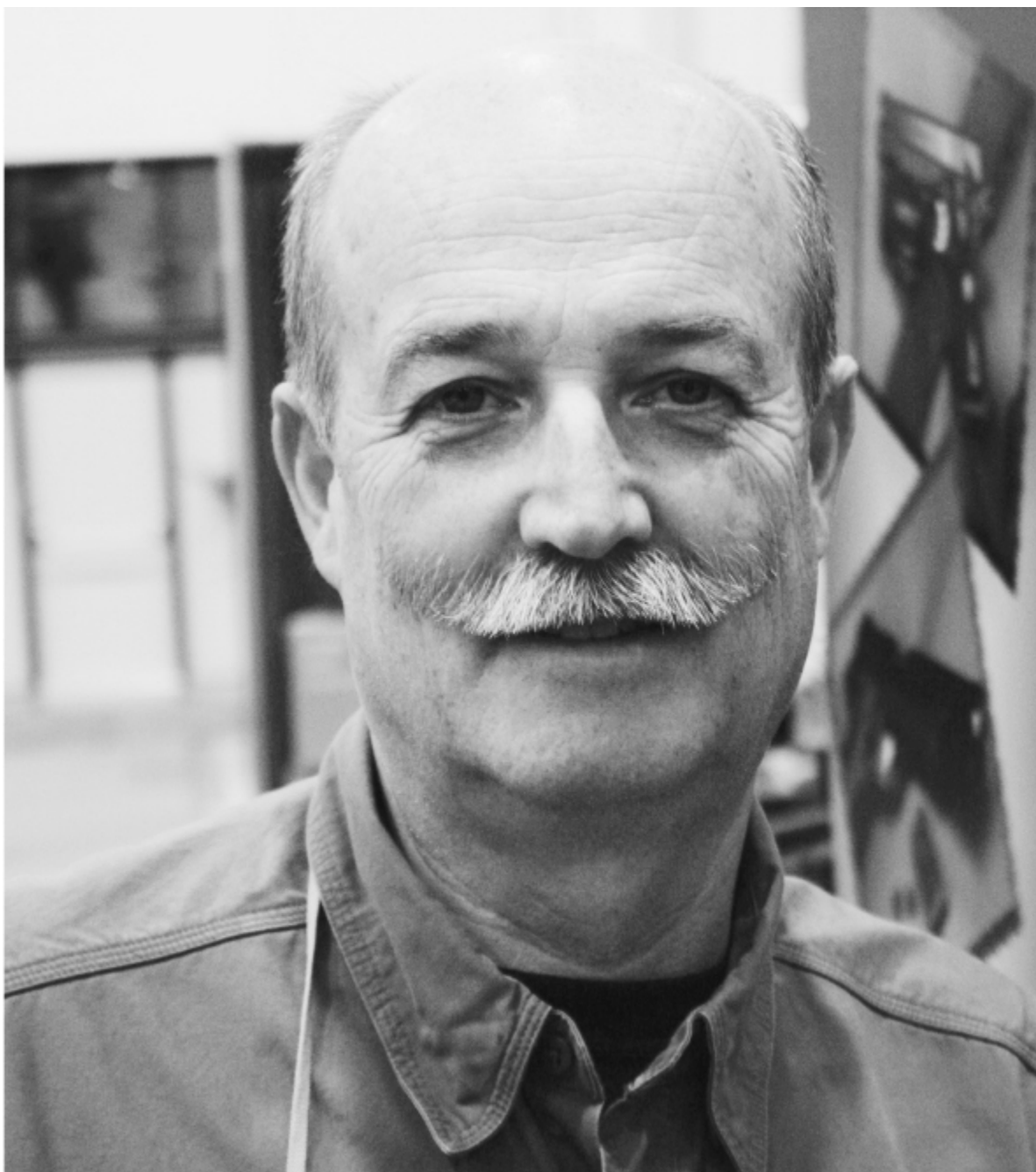
The Safe Direction case has a side pocket for extra gear. Or your magazines while transporting it.



You are not exactly low-profile if you transport your 1911 in a case such as this. Try to be a bit more discreet. If, on the other hand, you have to transport an AR-15...

Finally, get training. You can go to Mas for training specifically in lethal force issues. He'll give you more grounding in what the legal system does and expects than your attorney got in law school. He will also, if you graduate from his class, come to your defense if the need arises, acting as an expert witness. Lethal Force Institute classes are heavier on classroom than on range time. But you'll get in enough shooting to prove you were capable of passing most (if not all) law enforcement qualification courses. If you want more shooting, then you need to go to someplace like Gunsite. Begun by Jeff Cooper in the 1970s, Gun-site is the premier training facility,

with extensive ranges, a staff of experienced trainers, and a long history of properly preparing students.



Ken Hackathorn has been in IPSC since the beginning. And IDPA, too. He can teach you a great deal about defensive shooting.

In my police department, one of the pluses for promotion would be a certificate from Gunsite.

If you hear a great big “Uh-Oh” coming from the Great Lakes, you’ll know that someone really liked my suggestions, and I have been appointed the training officer for a department. I’d be groaning not so much at suddenly getting to implement my suggestions, but at the paperwork involved. (Ed: Admit it, you’d love it, regardless of the paperwork.)

Defensive Training And Practice

To get better at defensive use of the handgun, you need to go someplace that teaches it. Here, we have a very curious dichotomy. To learn to shoot in competition, you go to a competitive shooter. To learn to shoot defensively, you go to a defensive tactics instructor. Like Gunsite, Thunder Ranch, Mas Ayoob, John Farnam or Ken Hackathorn. However, those who teach defensive shooting, and are serious about it, or those who regularly do defensive shooting, like SWAT teams and Special Ops units in our military, go to competitive shooters. Why the difference? Simple. A competitive shooter will be able to teach you the fastest, most-efficient way to utilize your 1911. The tactics part is up to you and your jurisdiction, which a competitive shooter can’t cover. Going to a shooting school in Florida, to learn defensive tactics for back home in Washington State doesn’t work well. What the schools and defensive tactics instructors do is teach you the bedrock basics; the legal aspects of ability, opportunity, preclusion. The basic tactics of dealing with corners, lights and downed offenders. The SWAT and Special Ops people already have their own tactics, their own rules of engagement, they don’t need a Grandmaster to teach them that. But faster shooting? You bet.

You can do things to practice on your own. The classic drills, listed in the competition section, will go a long way to teaching you good shooting, especially if you incorporate concealed carry and cover into them. However, one course I’ve been trying has proven to be very eye-opening. It comes from Pat Rogers, a 30-year veteran of both the Marine Corps and NYPD. It is the MEU-SOC qual course. The course has two parts, a rifle and a handgun part. We’re interested only in the handgun part, but you need

a rifle to do it. The course is for Marine MEU-SOC personnel, and requires a full-up web gear, and a slung M4. For our purposes an AR-15 will do. The holster is a tactical thigh rig. Those who want to get a better score should select a Blade-Tech dropped and offset, for the times are not easy with a snapped thigh rig. You start with the unloaded rifle on low ready. On the beep you lift, dry-fire the rifle on target, then get it out of the way and draw your 1911 to shoot the course. Each string starts that way. When you move, you move on the draw. A passing score of 80 is not easy.

Phase 1, one target

At 25 yards, a pair of shots standing, and a pair of shots kneeling. Time 9 seconds

At 15 yards, a pair standing, and a pair kneeling. Time 8 seconds.

At 10 yards, a pair standing, speed reload, pair standing. Time 6.5 seconds

At 10 yards, same as above, but move to shoot, move on reload. Time 6.5 seconds.

At 10 yards, move on draw, shoot two to the body, one to the head. Time 4.5 seconds.

At 7 yards, pair standing, strong hand unsupported. Time 4 seconds.

At 7 yards, pair standing, weak hand unsupported, weak hand draw. Time 10 seconds.

At 7 yards, pair standing, both hands, speed reload, shot to the head. Time 6 seconds.

The times may seem generous, but remember you're aiming and dry-firing a rifle, then drawing. And the weak-hand draw on the seventh string can be quite hazardous. Be careful!

Phase 2, two targets.

At 15 yards, a pair to target 1, speed reload, a pair to target 2. Time 8.5 seconds.

At 10 yards, move on draw, a pair to target 1, speed reload, a pair to target 2. Time 6.5 seconds.

At 10 yards, move on draw, a pair to targets 1 and 2, speed reload, then head shots on targets 1 and 2. Time 8.5 seconds.

At 7 yards, move on draw, pair on both, speed reload, pair on both. Time 8 seconds.

At 7 yards, one shot to head, target 1. Time 4 seconds.

At 7 yards, one shot to head, target 2. Time 4 seconds.

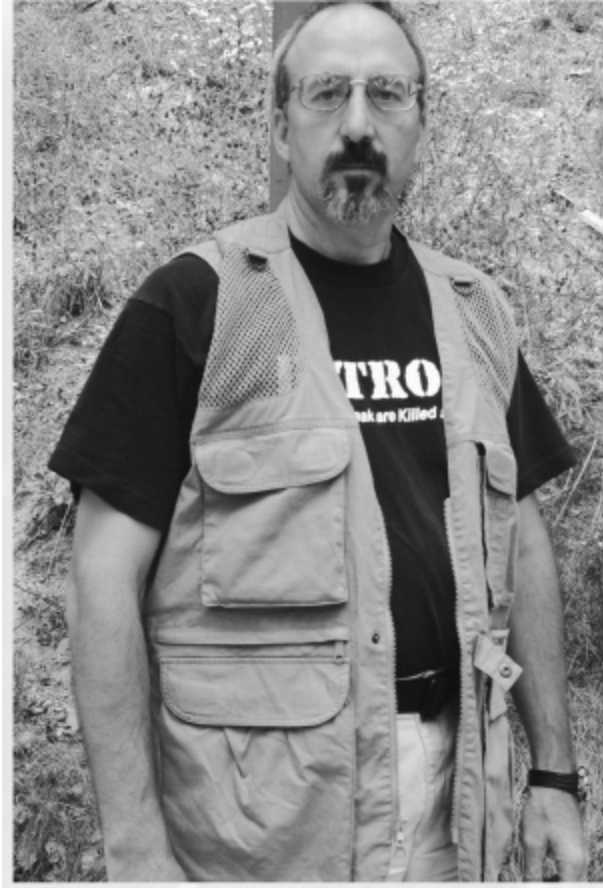
That's 100 rounds, folks, and a very difficult course. If you practice and get to passing, you've accomplished something.

The MEU-SOC course is not something you should go into lightly, trying to simply read the course, set your timer, and shoot. Use it as a training experience. Plan to shoot a couple of hundred rounds in practice, trying each string on its own and being very, very careful on the weak-hand draws.

Chapter 10

Competition for the 1911

What has changed since Volume 1 came out? In some areas, not much. In others, a whole lot. One big change is that the 1911 pistol is hotter than ever. More police departments have adopted it as a duty or off-duty gun. Some areas have even gone so far as to institute special 1911 maintenance or utilization courses in the law enforcement curriculum, so those wishing to adopt it may do so with the full blessing of the department. The 1911 is being heavily debated in military circles. The Marine Corps, long the last bastion of 1911 use, has issued contracts for replacement guns. For decades they simply rebuilt the existing stocks, and stubbornly refused to relinquish them. While held solely for the MEU-SOC units (Marine Expeditionary Unit-Special Operations Capable) you can bet other Marines looked longingly at the 1911s still in use. An expansion of 1911s issued may result from the extra numbers of them available.



Many states now have a “Shall Issue” CCW policy. There are a bunch of people in photographers vests who don’t take pictures.

More states have gone to Shall-Issue CCW. Under the old system in many places, you either simply could not get a permit to carry, or you had to prove a “valid need” for one. In a lot more places than you’d care to think about, a “valid need” was proven once you’d made a sufficient contribution to the re-election campaigns of various politicians. (And in a lot of places, the chief, sheriff, constable or whatever the title, was a politician with his hand out.) “May issue” also depends on connections, power, money and legal status. As in, how heavyweight is your law firm? While abuses of the old system were pretty common, there are a couple of current ones that are illustrative. One may not own a handgun in San Francisco. In New York City, a population of 8 million, there might be a few thousand handgun permits. Most of those are restricted, as in Target (own for target shooting) Premises (keep at your business) or Security

(work for a security company? Carry only on the job.) Guess who has unrestricted carry permits good in their respective locations? Senator Diane Feinstein of California, and Senator Charles Schumer of New York. Any wonder why many voters view politicians as little more than pond scum?



If you're going to carry, carry comfortably. Otherwise your own holster will give you away.

Under "Shall Issue" you apply for a CCW, or CPL, or whatever the acronym is. Unless the investigating agency has documentation proving why you should not get to carry, you get issued your permit. (Of course there are often other requirements; classroom work, range work, proof of performance, etc. And don't forget the check for your paperwork.) Before the big push, there were a few states known to readily issue carry permits. The rest were "may issue" states. Now, we have the opposite. Most states are Shall Issue, and only a handful are either May Issue or No Issue. With

so many states allowing carry, there are more people carrying. And some of those new permit holders have succumbed to the lure of the 1911.

With the increased interest in the 1911, competitive venues are paying attention. And for many it is still the best, if not the only, gun to use. If you plan to use your 1911 competitively, it would be best to do a bit of homework first. At many clubs you can just show up to shoot in a match. You need not be a member. At others, you have to be a member to shoot. And then there are the requirements of the organization. You can shoot in a USPSA sanctioned match from now 'til the end of time, and not be a USPSA member. Some IDPA clubs insist that by the second match you be an IDPA member, even if you don't have to be a member of the host club. Regardless of membership requirements, you may not be bringing a 1911 suited to the particular rules of the match. While many clubs will let you shoot with whatever you've brought, some are not so easygoing. Some because they can't be. A club devoted to Bull's-eye shooting may tell you that you can't use your IPSC Open racegun simply because their backstop isn't up to it. If they have an old indoor range, the steel may be stout enough only for soft target loads such as .45 semi-wadcutters, or .38 Special wadcutters. Your 125-grain jhp at 1,360 fps may be more than their elderly backstop can handle. An IDPA club won't be happy about your using a racegun speed holster. They might be gracious about it, and then again they might not. It pays to do a little web research to find a club that is close enough to get to, and what kind of shooting they do. You'll have a lot more fun if you know what's up.

USPSA/IPSC

The the biggest competitive field for the 1911 outside of Camp Perry is "Ip-sick" shooting. It has more divisions where you have to use one or another 1911 model than any other. You can use one or another 1911 in five of the six divisions. The international body has slightly different names (in parenthesis), and not all categories: Open, Limited (Standard), Limited Ten(nothing comparable), Single Stack (nothing comparable), Production and Revolver. International also has a category not found in the U.S.: Modified. You'll occasionally find a Modified shooter at the U.S. Nationals, but it isn't a U.S.-recognized division.

Open

Open is almost unlimited. You can't use a caliber smaller than 9X19. You can't use a magazine longer than 170 mm. Other than that, the sky's the limit. What you'll see in Open are high-capacity .38 Super (or variant) guns with compensators and optics. The names you'll see are STI, SVI, Para-Ordinance and a few examples of others such as Caspian. You will rarely see guns other than .38 Super or some derivative of it. Other calibers hold less ammunition in their 170mm magazines, and so are disadvantaged. You'd have to search far and wide to find a single-stack Open gun. They went out of fashion in the early 1990s, when the high-capacity guns became available. You probably will not find an iron-sighted Open gun. On close, wide-open targets the optics offer a small advantage. But as soon as the targets are set past the 15-yard mark, or are even partially obscured, the optics offer a large advantage.



You'll have to use custom-loaded ammunition to feed the ports and comps on an Open gun.



Open guns use 170mm magazines, which hold nearly 30 rounds of .38 Super. Open shooters don't do a lot of reloading against the clock.



An Open gun can run you \$3,000. But you get stellar performance for that investment.

The 170mm magazine holds on the order of 25 or 26 rounds of Super or 9mm derivative cartridges. If you're willing to fuss, test, and run some risk of malfunctions, you can sometimes expand that up to 27 or 28 rounds.

You can do anything you want to an Open gun provided it is safe and meets the caliber and magazine requirements. If you could figure out a way to wire the trigger directly to your brain and take the trigger finger out of the process, Open would allow it.

It is easy for a full-house racegun to cost on the order of \$3,000. Feeding it requires custom-reloaded ammunition (competitors usually load their own) which can run as high as \$200 per 1,000 rounds.

The rules for Open are pretty much the same between the U.S. and International organizations.

Limited

The old Stock category, Limited expanded as Open did, in the 1990s. A Limited gun is limited only by four things: sights, muzzle, magazines and bore. You must use sights that are not optical. You may use fiber optics, but nothing with lenses or electronics. You may not have a compensator. Your magazines may not be more than 140mm long. As for the bore, you must have a .40 or larger cartridge in order to declare Major in scoring. A .38 Super or 9mm Limited gun will be scored Minor, regardless of what downrange performance your cartridges deliver. The limit was put in place in the earliest days, to prevent shooters from trying to make Major with various 9X19 handguns. It is theoretically possible to build a Limited gun that is fed Major .38 Super or 9mm ammunition, that would be safe and have a useful service life. However, that gun would have to be a 1911, as many other guns don't have the long-term strength to deal with such loads. And allowing it would spark an equipment race, where competitors would be ditching or rebuilding guns overnight, trying to get the advantage that a 9mm Major Limited gun would deliver: four or five more rounds. Limited Division magazines are restricted to not more than 140mm in length. A magazine for a Limited gun in .40 S&W (almost all are .40, very few can be found in .45) will hold 18 rounds. With a lot of work you might get 19, but few will hold that many and still be reliable. Changing from .40 to 9 mm can up the capacity to 23 or 24 rounds. The extra capacity, when scored Minor, isn't enough. (There have been enough who've tried, to make the point clear.) However, more rounds if scored Major would be an advantage.



Some gunsmiths shoot competitively. Here Bob Londrigan shoots in the 2005 USPSA Nationals.



Open guns are often spectacularly accurate. Ten shots, under 2 inches, at 50 yards. Usually I'm not up to that level of shooting, but the gun obviously likes me.



Limited guns are still hi-tech masterpieces. Here Todd Jarrett shows us how to run a Para at top speed.

Thus, to avoid rebellion in the ranks, and to preclude the inevitable unsafe combination (“Hey, my gunsmith says its O.K., so I’ll shoot my WWII trophy bring-back Luger as Major, thank you.”) the USPSA has not yet, and probably won’t approve 9mm Major for Limited.

What can you do to a Limited gun? Everything not prohibited. Sculpt the slide, change the spring, guide rods, sights (as long as they are “post and notch”) grips, and so on.

A Limited gun can easily reach the \$2,000 cost level. The ammunition isn’t so expensive as Super loaded to Major for Open, but it can still be expensive. Practice reloads can run under \$100 per 1,000, but match ammo can exceed that figure.

At the International level, the Division is called Standard. And there, the pistol and its magazine in place must fit the size box. What it means is that you can’t use a magazine longer than flush with the frame. A super-tuned

magazine (the nominal length is 126mm) will hold 17, sometimes 18 rounds of .40 S&W.

Limited Ten

When we had the magazine capacity laws passed some years ago, the USPSA had to bow to the reality of law: there was no exclusion for competitive shooters. So “L-10” is simply Limited with a capacity restriction. You can do all the other stuff but you can’t have more than 10 rounds in a magazine. The big debate in L-10 is “Widebody or not.” Is it fair, reasonable, or even sporting to simply use a hi-cap gun with magazines holding 10 rounds? The big advantages that the widebodies are felt to have include the tapered magazines going into a larger magazine well for faster reloads and the fatter frames track “truer” that is, they have less side-to-side wobble during recoil, and are thus faster to shoot accurately.



In practical shooting it isn’t all quick-draw. Sometimes you have to get your 1911 out of the oddest places. A tabletop is almost boring.



Often, the stage is set up so you have to figure it out. When the full stage description is; “Engage the targets as they become visible” you’ve got a lot of leeway.



Stage designers will often force you to work hard to get clean angles on the targets.



Single-Stack rules don't allow bull barrels, or coned barrels. You must run a 1911 with a barrel bushing.

The truth is, most of the top shooters shoot widebody guns in Limited 10 because that is the gun they have. Why go to the expense of building, tuning and then shooting a single-stack 1911 for the Limited 10 category, when they have a pistol ready to go? For the single-stack category, that's why.

Internationally, there is no Limited 10 Division. And for good reason. I had one competitor at a past World Shoot (the IPSC World Championships, held once every three years) tell me "If my Minister of Sport found out we could compete with 10-shot magazines, he'd disallow hi-caps and we'd have to turn them in." Minister of Sport? Sounds like it is time for another revolution.

Single-Stack

The idea is to allow those with the basic 1911 pistol to compete against others with the basic 1911 pistol. The category is provisional (as of January, 2006) and will probably be subject to some fine-tuning. Basically, what you need to know is this:

A standard single-stack 1911, with iron (or plastic) sights of the notch-and-post type. No plastic frames. No coned barrels, except those with short barrels. (Shorter than Commander, nothing longer than 4.20" are allowed.) No light rails or extended dustcovers. The pistol as made, with a magazine

inserted, must fit inside the IPSC Standard box. A government model makes it, with a mag funnel. You cannot have barrel weights, comps, ports or optics of any kind. The pistol must be available to the general public. The calibers allowed to score Major are .40 S&W and larger. From 9mm up to .40 S&W you must shoot it for a Minor score. Major guns can have a magazine capacity of only eight shots, the Minor guns 10 shots.



In Production, you can run a Para Ordnance LDA in 9mm, as Roger Sherman is doing here.

Why all this? To make the equipment requirements for IPSC/USPSA shooting attractive to the shooters who frequent IDPA and the Single-Stack Classic. To make it even more attractive, no speed holsters are allowed. Your holster and magazine holders, must conform with the rules for Production. No speed rigs. Holster and magazines must ride on your belt at or behind the side of your body.

However, within the rules you've got a whole lot of room to maneuver. The rules allow for anything from a box-stock Charles Daly or Rock Island Armory (retail in the \$400 range) up to a custom-tuned and stroked, everything-including-a-custom-serial-number. Wilson Combat or Ted Yost

special. Which would set you back \$3,000 or a bit more. The list of things you can do is much longer than those you can't. As it is a provisional Division, the rules are subject to a bit of fine-tuning, so I don't want to chisel them in stone. The best thing to do is consult the rulebook on-line with the USPSA, and make sure you haven't added something that isn't allowed. Although as long as it is a single-stack 1911, no comp and no optics, I can't imagine what you could add that wouldn't be kosher.

The International body has no single-stack division.



If you shoot in Production, you'll have lots of competition, guns and people. Here Matthew Mink is using his CZ at the Nationals.

Production

A Production gun is a double-action gun. You can have a pistol capable of being cocked and locked (Condition One) but you must be able to fire it for the first shot by cocking the hammer via the trigger. That means only one 1911, the Para LDA. Production also requires that all calibers, regardless of the power they actually dispose of, be scored Minor. You don't have to shoot a 9mm, but you'll be scored as if you were shooting one. Without the Minor requirement, all shooters would feel compelled to

shoot Major, and that would exclude some basic and popular pistols from the Division, and thus from USPSA competition. As a final cap, the capacity is held to 10 rounds. You can use magazine that holds more, but if you load more you'll be penalized. (The way the rules are structured at the moment, the penalty is to be bumped to Open, against the hi-cap guns with comps, dots and Major scores. Don't mis-count, if you use regular mags.) So, 10 shots, Minor, 9mm, there are a bunch of LDA models that would do the job. One is the hi-cap loaded to 10, such as the one Roger Sherman of the U.S. Air Force shooting team has been using.



You can see from the comp blast that comps work and Modified guns work.

Another approach is to use a .45, 10-round magazines, and handload the ammo to a very soft recoil.

You can make many changes to your Production gun. You can swap barrels. You can change sights, even install adjustable sights, as long as they are of the standard notch and post type. You can install grip tape, you can change the finish. But you must use a holster that is suitable for daily wear.

No speed rigs. And the holster and mag pouches must ride at the sides or behind.

Internationally, Production is quite different. First, use any holster or mag pouch you want, and mount them anywhere the general holster rules allow. As for the gun, you can't change anything unless it is a factory option. Sights, barrels, grips, etc. all have to be factory options. The first trigger pull must be more than 5 pounds. And you can't even change the finish. If the finish wears, you must have it re-done (if you bother) by the factory or a factory-approved OEM.

Revolver

As there is no 1911 revolver, the point is moot.

Modified

Modified guns are Open guns that fit the IPSC Standard box. You end up with bevel-snout guns that appear to be standard-size 1911s, with flush-fit 126mm magazines. You can have comps or ports, you can have optics, but you must be at .40 S&W or larger to shoot Major. Modified is moderately popular Internationally. Some places it is quite popular. In the Philippines and South Africa there are (or were, in South Africa) many Modified shooters. The Czechs also send a good contingent to the World Shoot. I've shot in two World Shoots in Modified Division, and I can tell you this: It isn't just a place for those who weren't good in Open. Modified shooters attack stages simply as Open shooters with more reloads. Here in the United States it isn't popular. It never caught on. As I recall, the USPSA Nationals with the most Modified shooters in it had five. If one hadn't DQ'd, the top shooter of those five would have been the National Champion, Modified. Probably the only one ever. With only four, that glory was gone.

Power factors

In the U.S. Major is 165,000 (bullet in grains times velocity in feet per second) while Minor is 125,000. Some few clubs have "dodgy" steel, and

may restrict bullet weight to avoid damage. But most do not.

Scoring in IPSC/USPSA

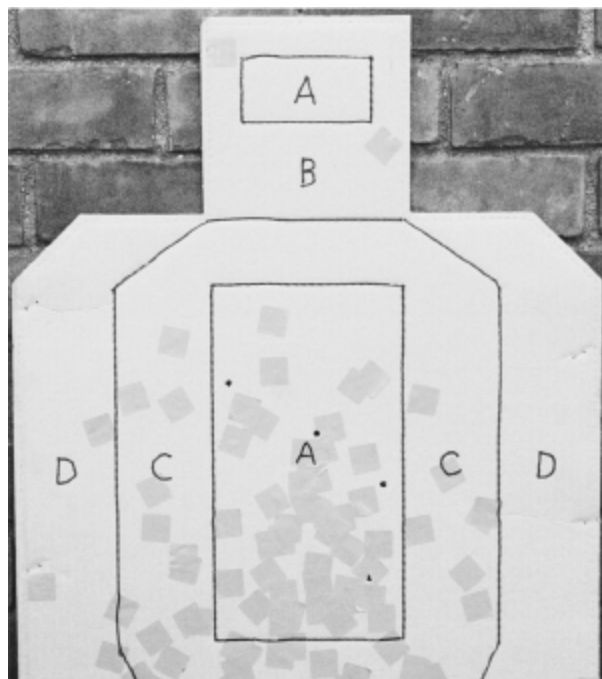
The scoring is simple, and Byzantine. Basically, you're faced with a course of fire. You shoot the targets in a safe and expeditious manner. The points you shoot (usually the best two hits on each target are counted) have any penalties subtracted (misses, shooting the wrong target) and the resulting total is divided by the time it took. A hundred points in 10 seconds, with no penalties, is a "Stage Factor" of ten. Here's where it gets complicated; the stage factors are ranked from largest to smallest. The highest factor earns 100 percent of the "Stage Points" on that stage. Each competitor then earns a percentage of the stage points, according to the percentage of their stage factor to the winner of the stage. For instance, someone who shot the same stage for 90 points in 10 seconds earned a Stage Factor of 9.0, and thus gets 90 percent of the stage points for that stage.

Then the stage points totals for each competitor are added. (Stage and Match results are usually done on a computer, with special software) The match winner is the shooter who has the most stage points, from placing the best in the stages. You can win a match, never having won a stage. The results can be close, as some Nationals have been decided by less than 10 match points, with the first and second place shooters having more than 1,200 points. And some Divisions are won by large margins. Dave Sevigny in Production and Jerry Miculek of Revolver commonly win the Nationals by hundreds of match points.

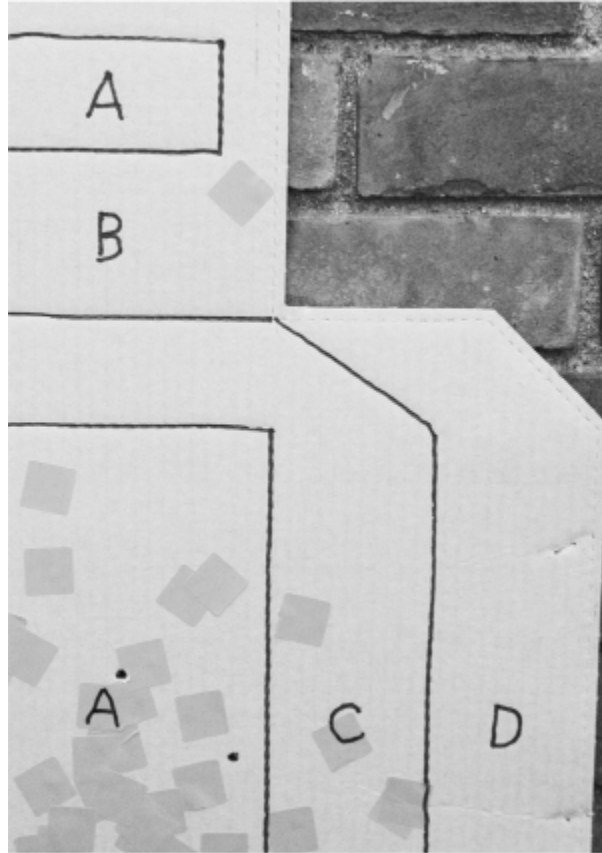
All clubs use the same basic method, whether it is for a three-stage club match, or the 18 to 20 stages of the Nationals.



A Modified Division 1911, with comps and dot, and still fits the IPSC box.



The USPSA target, with scoring rings highlighted. Accuracy matters, for you cannot miss fast enough to win. But sometimes a really fast edge hit is better than a slow center hit.



You see here the scoring area, A, B, C and D. The points you get differ from Major and Minor in B, C & D.



USPSA/IPSC shooting is speed, and speed means fast reloads. Your magazines will end up in the dirt as a result, so have spares and treat them all well.

IDPA

The International Defensive Pistol Association was formed when the IDPA founders felt that IPSC had strayed too far from its martial roots. The rules tend to be a bit more restrictive, and you encounter penalties in IDPA that have no counterpart in IPSC. For instance, in IDPA you can be penalized for “Failure to do Right” which is to deviate from the details of the course description. (In IPSC, the common course description is simple: “engage the targets in a safe manner when and as they become visible.” You are penalized or DQ’d for doing so unsafely.)

IDPA requires holsters and magazine carriers that are suitable for daily wear. What constitutes “daily wear” is the subject of some disagreement, and thus the rules are always being discussed, and sometimes changing. The stage layouts are much different than IPSC. In an IPSC/USPSA match, you could be faced with a stage of anywhere from six to 40 or more rounds. Some clubs pride themselves on putting on annual monster stages or matches, where you’ll be faced with five or six stages that each have well over 50 rounds each. In IDPA you’ll not face a stage that requires more than 18 rounds. The idea is that a huge field course, while fun and exhausting, is not realistic. In real life, you’ll not have to do that unless you find yourself on foot in Fallujah.

In IDPA we have three Divisions here a 1911 can compete: CDP, ESP and SSP.

CDP

Custom Defensive Pistol. Here, your choices in the 1911 pantheon are simple: a Government, Commander or Officer’s model in .45 ACP. The .45 is your only choice. At one time others were allowed, but a rule change disallowed them, and .45 is all there is. If you have a 10mm 1911 you have to use it in ESP. The equipment rules in IDPA are sort of like the law differences between the U.S. and Germany, as the old joke goes. In USPSA, unless something is specifically prohibited, you can do it. In IDPA, unless

something is specifically allowed, you cannot do it. IDPA has a list of approved modifications, upgrades and changes. If you do something not on the list, your score will not be entered. A lot of clubs will still let you shoot, especially if its your first time, but your score won't count towards the match standings. Magazine capacity in CDP is limited to 10 shots or flush magazines, whichever is lesser. CDP pistols have to exceed the IDPA Major threshold of 165,000.

ESP

Enhanced Service Pistol. All the other calibers are allowed. While shooting in ESP with a 10mm, .400 Cor-bon or .40 S&W might be fun, it is hardly competitive. ESP guns only have to exceed the IDPA Minor threshold, 125,000. You can shoot a hotter load, but you won't get any extra credit or score for doing so. You can certainly load them down and de-tune the gun, but ESP is for a category that hardly existed before IDPA: Minor Limited. Now, you can't have a hi-cap gun in IDPA, but if you happen to have a single-stack 1911 in .38 Super or 9mm, you have the basis for a killer ESP gun. The trick setup for competition is a Government Model in 9mm. You get the full sight radius, soft recoil, cheap ammo and fun shooting of a Government Model. If you really do carry, and want to carry a 9mm, then a lightweight Commander is just the thing. You give up a bit, but not much, to the Government shooter.

SSP

Stock Service Pistol. Here, double-action 9mm pistols are the preferred choice. And you are left with the same Production choice as in USPSA: the Para LDA. (Not a bad choice.) And you only must exceed the Minor threshold of 125,000.

IDPA Scoring

Unlike the Byzantine scoring of USPSA/IPSC, IDPA simply scores time. You are assessed time penalties for hits outside of the A zone, for not using cover, for deviating from the stage procedure, and for failing to do right. The basic penalty is one second, with more added for each penalty and some, like FTDR (20 seconds) really adding up. The severe penalties (a second here, a second there, it adds up on a 12-second stage.) end up

creating a slower shooting pace in IDPA. Well, slower for all but the top shooters. There, they hardly seem to slow down from their usual USPSA/IPSC pace. (Yes, the top dogs shoot both.) A full second for any penalty slows most down.

For faster shooting, and more of it, IDPA shooters can often be found at USPSA matches, where the equipment (holsters and mag pouches) are not as much of a handicap as some might think. More shooting? The IDPA guidelines call for no stage to exceed 18 rounds. A club with four stages can't get past 76 rounds, usually less. A USPSA club can often have more than 100 rounds, and some bigger clubs with more than four ranges can get up to 200 rounds. For those who like to shoot, more is better.

IDPA gear

In addition to the gun, holster, mag pouches and stuff, you'll often need a "cover garment." Many IDPA stages call for concealed starts. You have to wear a coat, vest or other garment to hide your gear.

1911 Society

The organizing body for the Single-Stack Classic, the annual match that goes back to the past, is the 1911 Society. It sounds a lot like a USPSA Single-Stack Division: Single-stack 1911s with notch and post sights, no comps, optics or coned barrels. The scoring is the same, for the Single-Stack is meant to be IPSC shooting from about 1985 without the comps. (Yes Virginia, we had comps back then. I shot the 1984 Nationals with a comped 1911.) If you gear up to shoot the Single Stack, you're good to go in USPSA Single Stack Division, and vice versa.



An IDPA CDP gun is a full-size .45 like this Dan Wesson.

The independents

Some matches don't have an organizing body and national clubs devoted to them. Some matches "just are." Here are a few:

The Steel Challenge

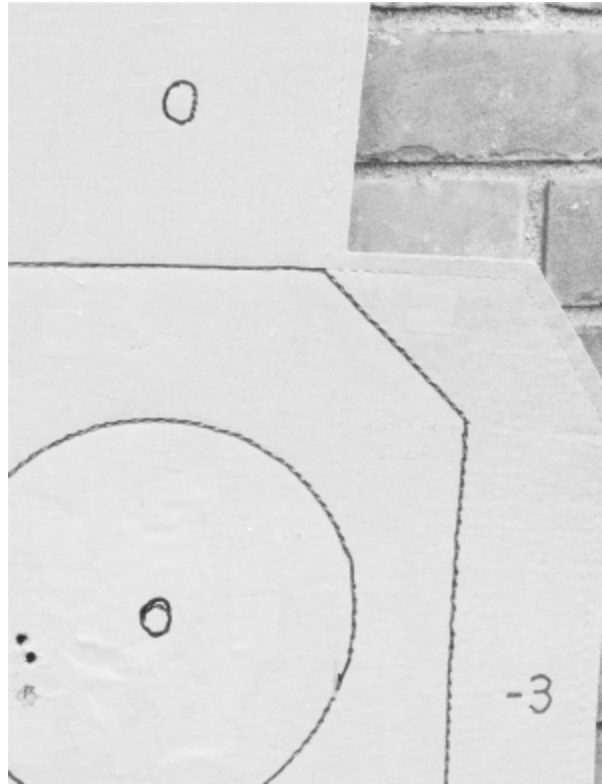
The format is simple: standing still (except for one stage) you draw and shoot five steel plates as quickly as possible. They range in distance from 7 to 40 yards. On each of the stages, you'll fire five runs, and your four fastest times will count for your score. Your match total is your total time for the seven stages of the match. Scoring is simple: did you hit the plate or not? A mark in the paint is a hit. There are no power factors. The divisions closely follow the relevant ones of USPSA/IPSC, IDPA, Cowboy Action

and other shooting disciplines. You can shoot the match in just about any division out there. How fast is fast? Typically, the top shooters will average five shots and five hits in less than three seconds a run. If you think you're good at high-speed hitting, this is your game.

American Handgunner Shootoff

The format here is as simple as it gets: you're always shooting against someone else, to see who can down their row of falling steel plates first. The "Shootoff" has 15 stages, each with a pair of falling plate racks and overlapping pepper poppers. At each stage you'll find a schedule sheet. You and your squad arrive, look at the sheet, and determine who starts against whom. On the start, you draw, shoot down your plates and determine the winner. Simple: knock down your plates and knock down the popper before the other guy does, and you win. Leave a plate up, or hit his popper by mistake, and he wins, you lose. Winners keep shooting. Losers sit down.

"How can this be fair?" you ask? "I've got a Glock, and my buddy has an Open gun." Simple. Each squad is a self-contained group of shooters with the same class and gear. If you are a B class USPSA shooter, shooting a Stock Auto, then that's who is in your squad. The A class shooters are in their own squad, as are the Open shooters. You shoot against the same 10, 20 or up to 32 people all day for three days. Each time you win a bout, you get a point. Each time you lose, you don't. Let's say your squad has eight people in it. That means four pairs. They shoot against each other and then the winners, following the elimination tree, square off. Finally, the two left shoot it out. On the next stage, the scheduling computer has arranged you in four different pairs, so you don't always start against the same other shooter. And so on with each stage you shoot. With only eight in a squad (our hypothetical B Stock Auto squad) you'll start against someone twice in 15 stages. With the maximum squads at 32 shooters each you might not shoot against the same shooter unless you and he both win initial bouts and meet again and again in the semis or finals. The big squads are B, C and D class, Stock autos and the like. If you're a master shooter in Revolver, plan on shooting against the same seven or eight people time and again. (Still lots of fun.)



The IDPA scoring is marked “minus one” and “minus three” but what it actually means is an added second or three.

You can go to the Shootoff and expend 1,000 rounds. You can draw so many times your hand gets sore and blistered. You can learn a great deal, and you can experience a great deal of adrenaline.



In IDPA you'll often be drawing from concealment.

Competition Instruction

Learning to shoot is one thing. Learning to shoot, and deal with the complexities, variables and pressure of competition, is something else. If you want to get good, first find out if you like competing. Go to a few matches at your local club. (Or the nearest, if there is nothing local.) Find out if you like it. Strange as it may seem, some people don't like competition. Once you find out if you like it or not, then you can go find competition instructors. The trick here is finding a successful shooter who is coming to an area near you. Often you'll find that a Grand Master will hold a seminar or class for the day or two before a local or big match. Say the club an hour's drive away is holding the USPSA Area match for your area. If a GM is going to shoot, he or she can easily come a day or two earlier, hold a class or seminar, and defray his or her travel costs. You get a days supervision with four, six or eight people under the watchful eye of someone who knows how to shoot.

I'd name names, but the field is constantly shifting, and shooters move into and out of availability. For instance, when I wrote the first volume, Jerry Barnhart was doing regular classes. Since then he has become so busy teaching only to the military that he has not held a civilian class in quite some time. He may not do so again. So, if you want to get "plugged into" the system, join the USPSA, follow the match schedule, and watch for big names holding classes.

Competition guns

What makes a competition 1911 different from a defensive one? A plinking one? A duty one? For a whole lot of people, not much. They carry and compete with the same gun. Or they carry on duty, and then compete with a single 1911. But for those interested in competition for its own sake, what makes a competition gun different? A few things, starting with:

Trigger pull

It isn't unusual to find a much lighter trigger pull on a competition gun than a defensive gun. As stressful as competition can be, it isn't anywhere near as stressful as a defensive encounter. To avoid inadvertent discharges, a defensive trigger should be a lot heavier than many competition 1911s have. A defensive trigger should be on the order of five pounds, instead of three, two or even fewer pounds. The Bianchi Cup may be the only competition that requires a trigger pull minimum, and attendance may suffer as a result.

Weight

Many competitors shoot heavy guns. Where a standard 1911 Government Model might run on the order of 36 to 38 ounces, and a lightweight commander 28, it isn't unusual for a hi-cap steel-framed competition gun to run 50 ounces. Packing a 50-ounce pistol under a coat all day is going to kill you. So why do competition shooters haul it? Recoil dampening. Shooting hundreds of rounds a practice session, practicing weekly, a lightweight gun will beat you up. Also, a heavier gun will shoot a

smidgen more accurately, as the mass of the gun resists sight-disturbing trigger slapping a bit more than a lighter gun would. The difference might mean a shot stays an “A” at 30 yards where it would otherwise have ended up as a “C” hit. One point may not seem like much, but points matter.

Finish

Having spent thousands of dollars on a competition gun, you’d expect the owner to pamper it and keep it scrupulously clean. You’d be wrong. The competition gun is likely to “be hacked on” (ground, filed, sanded, and otherwise altered to fit) and covered in sticky hand powder or grip residue. Many can be generously described as “used.” Others look as if they “had been ridden hard and put away wet.” Thousands of draw and dry-fire iterations, and match after match in the rain, sun, snow, wind, dust and sweat take a toll on finishes, even hard ones.

Common calibers

You’ll find competition 1911s in .45, .40, .38 Super and 9mm. Someone might be using 9X23 brass in a pistol marked “.38 Super” but brass is simply a consumable, like primers and powder. You would have to search to find a competition gun in 10mm. Not because it is unsuited, but brass is expensive. While you’re buying 10mm brass at \$50 per 1,000 cases, your buddy is down at the police department getting a free bucket of once-fired .40 S&W brass. And rarities like .400 Cor-bon are not seen. Something like the .357 Sig is relatively common in some police circles, but there is no advantage in using it in any competition, so why bother? And real rarities, like .30 Luger, .41 Avenger are simply non-existent on the competition ranges.

Ideally, you want to be using a competition gun where you can get ammo anywhere. At the world Shoot in Ecuador, 2005, ammo was a problem. Many shooters found their ammo shipments had been held up, or they were caught at the airport with too much weight. Those shooting 9mm could buy what they needed. Those with .45 ACP could buy expensive ammo. But the guys with custom-loaded .38 Super to feed their Open guns were really at a disadvantage. Even if they found ammo, there was no

guarantee it shot to their dot, and as for the ammo properly working their comp to dampen recoil? Fat chance.

Chapter 11

Reloading the 1911

Loading for the 1911 is not that difficult. But there are a few things you need to be aware of. As I pointed out in Volume One, the 1911 is a little hard on its ammo, crashing each round into the feed ramp, and requiring a lot of back-and-forth and up-and-down action before each is safely in the chamber. Thus you must be careful in bell and stem diameter and crimp settings. But once taken care of, they stay set for a long time.

One puzzling problem with reloads, that is most-easily solved with gunsmithing, is premature lock. If you're merrily shooting along, and the gun locks open before it runs out of ammo, you have a problem. First, determine when. Does it happen with a round left in the mag? Probably a magazine follower correction. Some magazines, in order to ensure a positive lock open when empty, have the shelf a bit high. While the higher shelf does create a positive lock, it can also create a problem with a premature lock. The easiest solution is to either modify the shelf of the magazine causing the problem, or swap out the follower for a new one.



A shooter who expects reliable function must use good ammo. Here Paul Carlson shoots the 2005 Nationals, secure in the knowledge his ammo has been checked. He loaded it, he should know.

A less obvious problem is the random lock open. This problem was tracked-down and solved by bowling pin shooters. The popular bullet was the Speer 200-grain jacketed hollow-point. While it is no longer made, it was the exemplar of an aggressive hollow-point for a long time. I got the lowdown on it, and its demise from Allan Jones at Speer. It was developed in the early 1970s, and while it was high-tech for the time, it was definitely far from cutting edge by the 1990s. One of its shortcomings in the new era was one of the great things pin shooters loved about it: its hard edge. There are no flat surfaces on a bowling pin; it is all curves. The Speer would bite into a pin, and not cave. But the hard edge decreased its ability to expand in gelatin. And short barrels reduced expansion even more.

It was produced on a specialized machine, along with a few other bullets that required a full-length jacket. That machine made those bullets and no others. When Speed developed the Gold Dot line of bullets, the others (all 9mm) were moved to newer machines, but not the .45. The bullet

was so popular it was still profitable to make, but there was no future for it. As the machine aged, it took more and more time to maintain and produce bullets. The machine could not be rebuilt, and no other machines could make the bullet. When the Gold Dot was far enough along, the “Flying Ashtray” was retired.



The .40, along with the 9mm, 10mm and the .38Super, all run at twice the pressure of the .45.

What does this have to do with lock-open? The 200 JHP had a huge opening. So wide that it was wider in its ogive than 230 hardball. On some guns, the sides of the 200-grain hollow-point would rub against the inside edge of the slide stop. The dragging could lift the slide stop enough that it would catch in the notch and hold the slide open, even though there was ammo left.

The solution was simple; find the rubbing spot (easy, it was covered with copper rubbings) and file it down a bit. It didn't take much. Once filed and polished a bit, the problem was solved. If you wish to fuss over your 1911, take it apart after a practice session, and before cleaning, look at the slide stop. See any brassing? File that spot just a bit and polish when done.

Pressure signs

For the most part, you are hard-pressed to get yourself into trouble with pressure in the 1911. The maximum pressure for a standard load in SAAMI specs is 17,000PSI. Most loads you'll see in loading manuals, that deliver common .45 ballistics, are less. Considering that the 9mm, .40 and 10mm all operate with a pressure ceiling twice that (34,000PSI) it is a rare mistake in the .45 that gets you into any kind of trouble. But you can manage it. The first sign of high pressure is one that a lot of shooters either overlook, or ignore. Look at the primer imprint. The firing pin will have dented the primer, and when the round fired the primer gets hurled back onto the extended firing pin. Given a normal pressure level, and normal cycling time, the firing pin has time to retract into the slide before the barrel starts unlocking. If you have excessive pressure, or an unusually weak recoil spring, the barrel can begin unlocking before the firing pin has had time to retract. The telltale sign is a teardrop shape to the firing pin indent. As the barrel unlocks it has to cam the firing pin out of the way, creating the little tail in the firing pin. If you're shooting a .45, and you have a recoil spring of normal or "close enough" strength in it, and see this mark, your pressure is too high. You can create the same look by using a light recoil spring. Some competition shooters do just that, to create a different sensation of recoil. They want a fast-cycling gun that has less muzzle drop on closing.

However, if your recoil spring is normal (above 12 or 13 pounds) and your firing pin spring and tunnel clean, then a tear-drop primer hit is a sign of excess pressure. It is also uncommon outside of competition shooters. The light-spring crowd sees it often, even with normal pressure. It just means the gun is unlocking earlier than John Moses Browning intended it to. But as he made the 1911 tougher than an anvil, you'd have to shoot it for a long time that way before you started breaking things. As in over 100,000 rounds. The only time I've seen it as a pressure sign was back in the days of making Major with 152-grain bullets for .45 Open guns.

More likely you'll see pressure signs in 9mm, .40 and 10mm guns. There, the classic pressure signs of cratered primers and flattened primers are what you should look for. A cratered primer is one that has a small lip around the firing pin indent. When the firing pin hits, it drives the round forward. The case stops either when the extractor stops it, or the case mouth

contacts the chamber shoulder. The firing pin then sets off the primer (if it hasn't ignited in the middle of this process.) When the powder burns, it drives the primer slightly out of the case. The primer stops on the breechface. Then the case itself gets driven back by the pressure of firing, re-seating the primer. A cratered primer has enough pressure to flow around the tip of the firing pin, creating the lip. A flattened primer expands against the breechface before the case slams down on it, re-seating it.

Cratering and flattening does not happen "just a bit" above the normal operating pressures of the 9mm, .40 and 10mm. It happens a lot higher than the 34,000PSI those rounds are rated for. It probably doesn't happen until you get into the upper 40,000PSI range. So by the time you see them, you are well past the normal operating pressure.

The solution is to change your reloading. Use less powder, or a slower-burning powder.

The .40 in competition

You may have heard about some of the solutions to competition problems. In USPSA/IPSC competition, the .40 is quite popular in some Divisions. The illusory advantage, and one some people have latched on to, is the suggestion that the .40 offers some competitive advantage over the .45, and thus is "unfair." Supposedly, the .40 has less torque than the .45, given the same bullet weights and velocities. And that this advantage is enough to make the .45 uncompetitive. Now, at the very top levels, there might (I say might, and perhaps should shout it) be some advantage. As I write this the 2005 USPSA Limited-Production-Revolver Nationals have just concluded. Robbie Leatham won Limited again, a little more than two match points ahead of Emmanuel Bragg. Two out of 1,200. At that level, an advantage of one half of one percent can mean the difference between winning and almost-winning. However, except for those who operate at that level, none of the rest of us could tell the difference between a .40 and a .45 if we were shooting each and didn't know which was which. No, the .40 is the competitive choice simply because for any given magazine length, a pistol chambered in .40 holds more rounds than one in .45. And unless you're shooting in a division with capacity limits, more is better. Thus, most

competition .40 1911s will be hi-cap guns like STI, SVI or Para Ordnance. However, the .40 has problems as a competitive cartridge.



Jacketed bullets in the .45 run .4510" plus or minus. Good ones are much "plus" or "minus."



One big advantage of reloading is making ammo exactly for the gun. The 1911 really prefers .45 ACP-length ammo. The .40, loaded long

(center round) feeds more reliably than the standard .40 (right) or the 10mm (left).

It was designed to be a 9mm-length cartridge. The 1911 and 9mm-length cartridges is not always a good fit. The .40 often feeds more reliably when it is longer. How much? Often, bumping it up from 1.15 to 1.18 or 1.20 in over-all length. How much does your gun need? The answer is to apply the Enos method. Load dummy rounds that are longer. Strip your .40 cal 1911 and re-assemble it without the recoil spring in it. Load your dummy rounds, and hand-cycle the slide. Note the smoothness or lack of same in the feeding cycle of the rounds. Try with a different length. When you find the length that your gun and magazine needs to feed as smoothly as possible, you're almost done. Take a dummy round and use a candle to smoke the bullet. Take the barrel out of your gun and scrub it clean. Drop the round into the chamber and make sure it goes all the way in. Then press or pull it out. Look at the bullet. Are there marks on the bullet from the rifling? That part of the rifling, where the lands are tapering up to their full size, is called the leade. (Pronounced "leed") If the bullet is already in contact with the leade when chambered, you'll have excessive pressures. You need a gunsmith with the right reamer who can "long-leade" ream your chamber.

A loaded round made long for USPSA/IPSC competition will not fit into the magazine of a pistol designed for standard-length .40 ammo, and often will not fully chamber. If you load your ammo long be sure and clearly label your ammo boxes, bins or cartons. Especially if you load two batches of ammo, long for an STI/SVI competition gun in Limited, and short for a Glock, CZ or EAA in Production. Otherwise you may find yourself at a match with .40 ammo that doesn't fit the gun you brought.

Major 9

You may, when reading about IPSC competition, read about "Major 9." The 1911 is not usually found as a platform launching Major 9 ammo. What it is, is 9mm Parabellum loaded to make Major. The reason the 1911 isn't usually the launching platform is that the 1911 is long enough to take the .38 Super, a better cartridge for making Major. The greater case capacity of

the Super allows for a slower-burning powder (and more of it) to make Major. Why then, the Major 9? To make Major in an Open gun built on another platform. Like the Glock. Or one of the CZ-75 clones. The big advantage the Major 9 adherents tout is cheap brass. 9mm brass is so common that you can buy it for not much more than the cost of brass itself. And once-fired brass from police departments is often free for the taking. Some commercial reloaders don't even take 9mm brass in trade, it is so ubiquitous. So the Major 9 shooters can shoot without the expense of .38 Super brass. Me, I don't see it. But then, I've got enough .38 Super brass to last me the rest of my shooting career, even without having to break open the bags of new unfired brass I have on the shelf.

The big drawback is pressure. To make Major in any 9mm case, be it Parabellum or .38 Super, you have to exceed standard pressures. In the 9X19, the standard ceiling is 34,000PSI. 9mm Parabellum+P is higher, at 38,500PSI. But +P ammo does not make Major. In many instances it doesn't even come close, although I have one instance of a Cor-bon 9mm+P load that makes Major from my Browning Hi Power. Out of a 1911 barrel of 5 inches long (the BHP is 4.75 inches) it could do a bit more. I've shot +P+ ammo, loaded by the ammunition manufacturers for law enforcement agencies to pressures even beyond the +P pressure ceiling, that didn't make Major.

So we can safely assume (the assumption is safe, if not the shooting) that anything in a 9mm case, be it Parabellum or Super, is over 40,000PSI when it makes Major. Probably well over. Stretching a mechanism designed for less than half that pressure is asking for trouble. That said, we have spent 20 years experimenting with the 1911 in .38 Super until we have guns that are accurate, reliable and durable. They shoot Major for many, many rounds, and gun blowups are now so rare that they invite curiosity. The same amount of time will probably produce 9X19 loads that make Major, assuming in 20 years IPSC is recognizable.



The big savings in reloading can come from using lead bullets instead of jacketed. Just be prudent and careful in cleaning up, and you won't have lead problems. 9mm Major does not use lead, nor heavy bullets like these 147-grain bullets. 9mm Major is not for the faint of heart, nor the sloppy reloader.

Where it matters is for those who carry. If powder makers keep working on powder formulations, they will eventually produce a powder that can be used in a 9mm case for Major. A powder that safely makes Major allows for a 9mm carry gun that really gets the job done. The noise and recoil might be stout, but you can't get something for nothing. At the rate we're going, by the year 2020, you might be able to buy a 9mm load off the shelf that produces a 125-grain jacketed hollow-point at 1,500 fps, with no more pressure than today's ammo generates bringing you 1,250 fps. There is, however, the matter of mechanical strain. Yes, pressure may come down, and yes, the pressures we're running today may be "safe" (as in; we haven't blown up a gun yet) but that doesn't mean it is a good thing. When you increase the pressure, you also increase the velocity of the slide. The slide unlocks, and impelled by residual pressure and inertia, is hurled back. The speed it moves is directly related to the pressure at which it operates. And the impact with which it strikes the frame is also related to the pressure, although a stronger spring can mitigate that. As many shooters running Open guns tend towards lighter recoil springs rather than heavier, slide

impact on Open guns can be pretty much assumed to have heavier slide-to-frame impacts than others. We may find that on some guns, the limit isn't chamber pressure but cycling dynamics and impacts. The 1911 will probably stand up to them a lot longer than other designs.

But for now, you need not run 9mm Major in your 1911. We have the .38 Super and 9X23 for that level of performance.

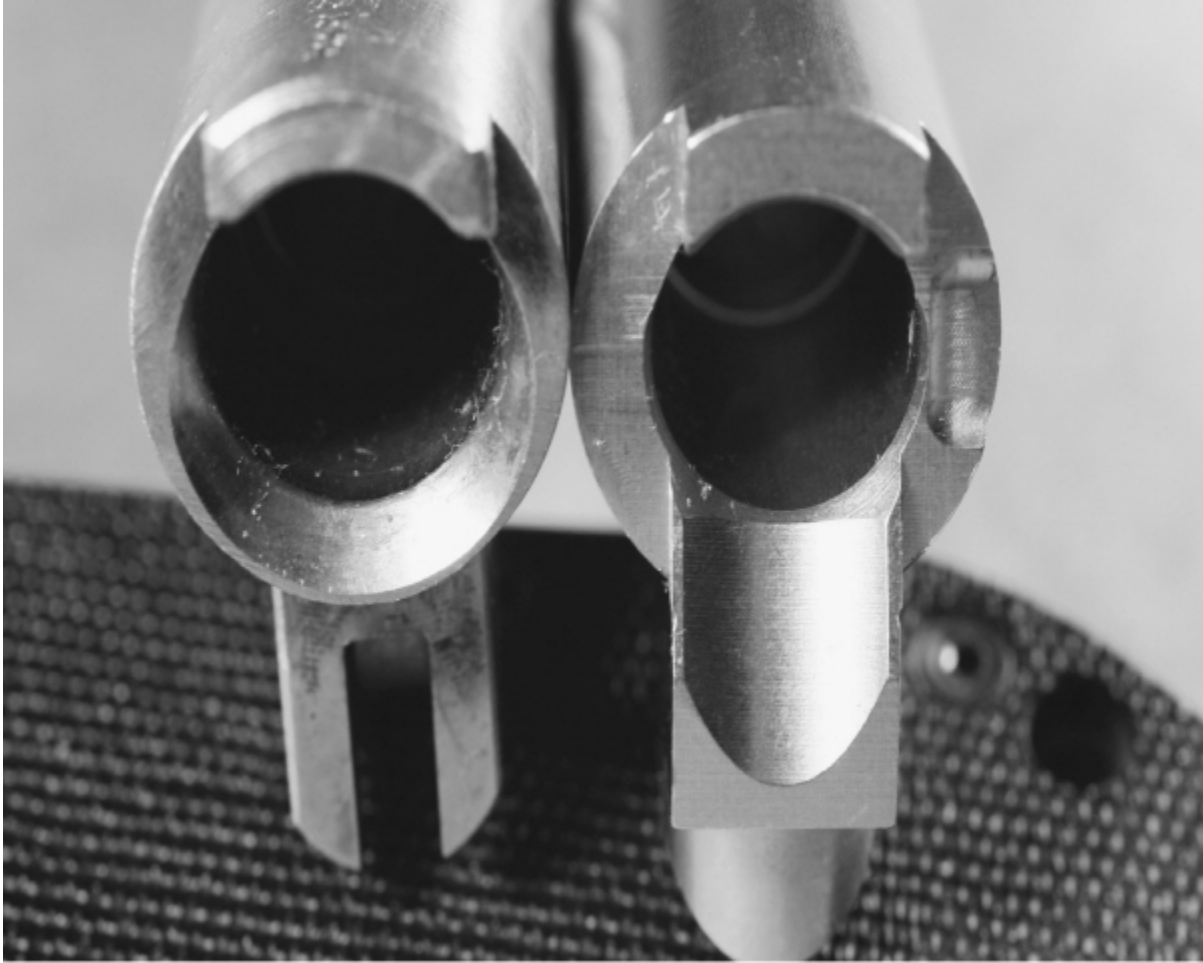
How can IPSC shooters get away with Major Super?

The Original .38 Super was a real barnburner. At a time (1929) when a hot 9mm load might feature a 115-grain bullet at 1,150 fps, or a 125 at 1,050 fps, the Super was booting a 130-grain bullet out the muzzle at 1,300 fps. Powders weren't any better back then, but the slightly larger case allowed ammo makers to get a bit more powder in, and bump up velocities. For a brief time the .38 Super was the up-and-coming police round, as it was able to penetrate car bodies and the crude body armor of the time. But with the advent of the .357 Magnum in 1935, the police stopped adopting the 1911, and stayed with revolvers, a situation that was to hold for the next half-century. Back then, someone who shot 5,000 rounds a year would have been a real ammo-burning shooter. By the 1980s, IPSC shooters were shooting multiples of that 5K, and the Super was the next big thing on the horizon. Except, we found that using the old powders was a quick route to an unhappy shooting experience. A condition known as "Super face" happened when a shooter had a case let go (blow out the bottom) and some of the gasses and splattered oil would shoot out the ejector slot, spraying the shooter's face.



The extra length of the .38 Super lets it use slightly slower-burning powders to achieve velocities the 9mm Parabellum cannot.

We solved the problem via three changes from the standard 1911: powders, integral ramps and comps. By going to slower-burning and denser powders, we were able to decrease the “spike” of initial pressure onset. The new slower, denser powders are now the choice of most shooters. Prime among them are the Vihtavuorii powders, and Alliant Power Pistol. The second change was to go to integral-ramped barrels. The ramp allowed the chamber to enclose more of the case, a condition called a “supported case” or “supported chamber”. The case is the weak link, and the case wall is thin. If the chamber walls do not enclose the case all the way down to the thicker web of the case, the case will blow out when the tensile strength of brass is exceeded. In the .45, that really isn’t a problem. With brass able to take 40-50-60,000PSI before blowing, and the .45 ACP commonly running well under its ceiling at 17,000PSI, you really have to work hard to bust a case.



Ramped barrels extend the useful life of brass. They give more support to the case at its weakest point.

The last step is to use a comp. The compensator dampens felt recoil by jetting gases up and by offering a surface for the gas to slam against, directly opposite the force of recoil. Not only does the gas force dampen recoil it slows down unlocking. Just as inertia is thinking about unlocking the barrel and slide, (if we can anthropomorphise a force) the barrel gets whacked with the gases, holding the barrel forward for another millisecond or two. The longer the barrel is held closed, the less the brass wall is stressed in the unsupported area. The comp work is something we can get away with only because modern guns and barrels are made of harder steel.

So, if you really wish to shoot Super at Major, regardless of whether you can do so for score in a match, you must do it with several variables correctly handled: You must load with slow powders. You must use an

integrally ramped barrel. And you really should have a comp. If you try to load to Major in an older gun, you will soon be in trouble. Let's say you load for your old (1950s or 1960s era) Colt Super. It is made of relatively soft alloys, and it has a standard ramp. You will soon find it getting beaten-up pretty quickly. And your brass may start blowing cases even if you use slow, dense powders. If you use other powders, the cases will blow even sooner. Fitting a comp will only buy a bit of time, as the extra force is exerted on the locking lugs and the slide lugs may set back or peen in short order.

If you have a classic old Super, shoot standard Super loads in it, 130s at 1,300 fps at most. And get a new gun for the hotter loads.

NT ammo

Sometimes I think the conspiracy theorists might be on to something. One of the bugbears of the environmental set is lead. Now, lead can be a problem. If you shoot indoors, smoke and drink on the range, clean the range, and don't wash your clothes often, you can get a lot of lead in your system. (That "not washing your clothes often" part is likely to lead to a lack of friends around to notice your lead-poisoning symptoms.) However, if you take precautions, lead is not a problem. Me, I've been shooting and loading ammo for over 40 years now. For 20 of those, I averaged on the order of 35,000 rounds a year. I've been on the range when others were shooting, in many cases a lot of people doing a lot of shooting. I figure I've fired close to a million rounds and been in the close proximity of several times that, fired by other people. You'd expect me to be lead-soaked. With so much lead in my system that when they cremate me there will be a little lead bar left in the ashes.

I hate to disappoint you, but I'm not. The measure of lead in your blood is micrograms per decaliter. That is, a thousandth of a gram per ten liters of blood. At the last physical, my number was six. Doctors don't even pay attention until the number is over 10, and don't start looking for a source until it is over 20. Shouldn't it be zero for someone who doesn't shoot? No. The decades of leaded gasoline in cars has caused enough lead dust to be laid down in our cities that you would have a couple of "points" of lead in

your system detected by any test, just from the lead equivalent of background radiation.

Isn't lead bad? Yes, but. What you are probably thinking of are kids in the urban areas eating paint chips made with lead. Apparently they taste sweet. Kids with lead poisoning from paint typically have a lead blood level much greater than 50, even past 100. Lead lying on the ground at a range poses such a small hazard compared to the paint, it is not yet worth worrying about. (Not to stop some from worrying, however.)

Where it poses a problem for us, is in the indoor range mentioned. Particularly in a police range. The rangemaster or the instructors will typically be in the range eight hours a day during qualifications. The range, the lockers, the lecture room used by the classes, have the potential to become "lead-soaked." That is, the dust is carried from one place to another, until you don't even have to shoot to get a good lead exposure. Rather than do elaborate decontamination procedures, and control the lead, the "easy" solution is to remove the lead from the ammo. Well, easy if you aren't an engineer or chemist making the ammo. First there is the bullet. Lead is useful because it is dense, easy to form, uniform, and inexpensive. Less-dense materials can be expensive, they can be hard (making the ammo armor-piercing) and the big problem, they make lighter bullets. Make a bullet too light, and you cannot use the same powders to generate the same velocities. And a lighter bullet must go faster, or generate the same force and work the action of a pistol. Lighter bullets going faster may not hit to the sights. Lighter bullets going faster can cause cycling problems when you use a pistol sprung for heavier bullets. The variables just keep cascading from bad to worse: Even if you solve the bullet and powder problem, you have the primers.

The essential priming chemical for most of the 20th century has been lead styphnate. Some compositions use other heavy metals such as Barium, in much smaller amounts. Each shot fired creates a puff of lead from the lead styphnate in the primer, right around the shooters hands and face. I've had the great pleasure to watch high-speed photography of handguns being fired, 1911s included. When the hammer hits, if the light is right, you can see a little puff of smoke come up out of the hood gap in the breechface. Having spent decades refining the balance of amount, sensitivity, brisance

(power of the priming flame) and assembly of standard primers, the ammo makers had to try to make something new. What they came up with worked, sort of. The problems could be solved with a few mechanical changes. The new compounds create more pressure in the priming cup. To relieve the pressure, some cases had the flash hole drilled/punched to a larger size. But the “real” solution was to use less of it, in a smaller primer. And that leads us to the evil NT cases.

The NT cases (Non-Toxic, is my guess) are standard .45 ACP cases with small primer pockets. And small pistol primers installed. The standard, used since the beginning of time, large pistol primer has no hope of fitting. All you can do is sort through your brass and toss out the NT-marked ones. If you don't, your reloading process will come to a quick and crashing halt as you try to seat the large primer in the small hole. Can we talk the makers out of it? No, apparently not. They are stuck with NT requests from large police agencies, and must satisfy their no-lead requirements. Which leads me to the next oxymoron of the situation: NT primers don't last.

The old chlorate primers, and the new lead styphnate primers both have long shelf lives. I have fired ammunition loaded for us in The Great War. As a matter of fact, I tested some just before sitting down to write this chapter. Headstamped FA 17 (Frankford Arsenal, 1917), it all worked just fine. NT-primed ammo does not have such a shelf life. In fact, it is practice and qualification ammunition only, and not to be used “on the street” or in a defensive situation. The primers, after a few years, sometimes fail to ignite. So, a police department that is using NT for training and qualification still has to have lead-based ammunition for issue on duty. With all of the functional and accuracy headaches that that can bring. The ideal situation would be to train and qualify with the exact ammunition you'd carry. The best alternative is to shoot relatively inexpensive jacketed bullets with a lead core, that duplicate the weight, shape and feeding, velocity, point of impact and accuracy of the duty ammo, which is probably a hi-tech hollow-point. I can see a future predicament where a department has practiced and qualified only with NT ammo, and some officer finds him or herself in a shootout, with a weapon that isn't reliable with the duty-carry ammo. And since it was never (or hardly ever) fired with the duty-carry ammo, who was to know until the shootout?

The conspiracy part arises with a bit of knowledge of chemistry. The lead uptake and exposure for those shooting is not anywhere near that of little kids in the city gobbling lead paint chips. It is entirely controllable. Lead does not get into groundwater with anything like the speed and spread of chemical solvents and other, liquid, toxins. It hardly goes into water at all. And yet those who dislike firearms are willing to treat lead as something close to plutonium in toxicity, and various organic solvents in its ability to contaminate groundwater.

Study after study has shown otherwise.

On top of which, back in the 1990s we had a bunch of conspiracy theories spreading like wild-fire that the ammunition makers were working on primers with a limited shelf life. The conspiracy theory went like this: if primers only lasted so long, we could not stockpile ammo. If the ammo supply became short-term, it wouldn't take much effort to vigorously control ammunition availability and supply. The idea was discredited back then, but there have to be more than a few theorists who are now sitting back saying "I told you so."

9mm Parabellum and IDPA & IPSC guns

The big advantage those who shoot IPSC Production, and IDPA ESP or SSP with a 9mm is cost. The cost of loaded ammo at the big-box stores is lower than it has ever been. The confluence of the ever-decreasing cost of copper (to the detriment of mining company stockholders) and the increased competition for the consumers dollar, have driven the price of 9mm ammo to the lowest price it has been. Ever. Adjusted for inflation, 9mm has never been cheaper. As an example, one state in which I teach allows police departments to buy ammunition "on the state bid." The State bargains with ammo companies for large volumes of ammunition. Which the state then lets departments buy from the makers at the bid price. The latest bid price for 9mm ammunition was (hang on to your seat) \$95 per 1,000 rounds. Less than a hundred bucks for 1,000 rounds, which translates to a box of \$50 for a bit less than a \$5 bill. Even adding in federal excise and state sales taxes, the price is cheaper than dirt. (The department doesn't pay the taxes. An officer who wants ammunition for personal use must pay

the taxes. And not turn around and resell it at the local gun show.) At that price, many who shoot a 9mm see no point in reloading.



Many Production shooters do not reload. At the price of surplus, or loss-leader 9mm ammo, reloading isn't worth the time unless you gain something besides just money saved. (Like ammo that makes Minor, or shoots accurately.)

However, not all 9mm ammo makes Minor. No kidding. I've shot 115-grain full metal jacket 9mm ammo that didn't post the needed 1,087 fps. And just because ammo is cheap doesn't guarantee it will be accurate in your handgun. Oh, it will be accurate enough for plinking and practice, but in match use you need all the accuracy you can get.

Getting 9mm ammo to run 100 percent in a 1911 can be a problem. First is the length. The 9mm is shorter than the Super or the .45, and as the mechanism is designed for those longer rounds feeding shorter ones can be a problem. As the slide goes forward it strikes the rim of the cartridge at 12 o'clock, and the impact acts to pivot the nose of the cartridge downwards. With the longer rounds, the nose strikes the ramp and pops back up. The shorter 9mm may tip too far before striking the frame, and might not always pop back up. Shooters who stuff 9mm rounds into a .38 Super magazine are most likely to encounter this problem. The solution is to put a filler in the

back of the magazine, to start the 9mm round closer to the feed ramp. You can see such fillers in single-stack magazines made for 9mm and for .40. The same tubes meant for Super and 10mm do not have the fillers. Hi-cap guns can have an extra filler installed. STI makes a plastic filler plate and shortened follower to adapt their magazines. You could modify it for the Para hi-caps if you needed to. Another option would be to load your ammunition longer, although there is a limit when loading 125-grain bullets. I know back in the early days of IPSC, many who tried a 9mm alternative to the .38 Super could load long simply because back then we were using 150-160 grain bullets. We were also loading them to Major, not an option for the modern Production shooter.



Surplus ammo is often badly stored. However, some is properly stored, and many shooters simply store their surplus for a “rainy day.”

The 9mm can also be tricky to load for reason not entirely 1911-related. I have encountered a number of 9mm pistols that would not shoot accurately a particular combination: lead bullets and fast-burning powders. The load in questions was a cast lead 125 grain round nose and Bullseye. I also loaded a lesser amount under 147 grain Durocast hard lead bullets. In my 9-pin gun these loads shot brilliantly. In other guns, not so much. My

Beretta M-92 would not put five shots onto a USPSA target at twenty-five yards with either of these loads. I'd be lucky to have two or three hits. After testing almost fifty different pistols, and measuring bores, twists, crowns, etc. and even re-cutting some crowns, fire-lapping some bores and using bullets from dead-soft to harder than sin, and from .3550" to .3580" in diameter, I found only one thing solved the problem: slower powders. Once I got to WW-231 and slower powders, the problem went away. Well, switching to jacketed bullets also solved the problem, but as jacketed cost more than lead, and I already had a literal ton of cast bullets on hand, I needed a non-jacketed solution. I still load some Bullseye, but mostly for 9mm I've switched to slower powders. Vihtavuori N-320, AA#5, and even WW-231.



Reloaders often reload more than one caliber. Be sure you label and store things so they can be easily found.

Volume tricks and tips

If you expect to get good, you have to practice. If you expect to practice much, you need a progressive loader. A pair of good machine brands I have experience with are the Dillon and the Hornady Lock N'Load. Dillon makes loaders from the basic (and yet still very capable) Square Deal B to the suited-for-commercial-volumes 1050 Super. The SBD can be had ready to go for a few hundred dollars. The 1050 runs over a thousand. In the

middle in price, the Lock N'Load offers auto case feed, auto shellplate advance, and caliber changes. Selecting, tuning and running a progressive press could take a whole chapter of its own, in a book on reloading. What I have room for here is the suggestion that you must buy a progressive if you expect to practice much, and how to run it for high volume without sacrificing quality.

“Can I justify the cost?” is a question I get asked often. It depends on what your time is worth. A single stage press is durable, accurate, dependable and slow. If you expect to load 200 rounds for the weekend practice or match shooting, you will likely spend an hour a night each weekday loading. You must size, deprime, seat primers, bell the case mouths, drop powder, seat bullets and crimp the case mouth all in separate operations. You must switch dies between each operation. Some, like sizing and depriming, can be done at the same time. Others, like seating the bullet and crimping, suffer if you do them in one operation. A press like the SDB can load those 200 rounds in a lot less than an hour. If you have clean brass, bullets, primers and powder on hand, with bins and hoppers loaded, you can probably load those 200 rounds during the time your wife's favorite sitcom runs, half an hour. If her show is an hour long, you have time to pull components out of storage, set up the press, load the ammo (and then some) and then put things away.

Now, if your wife is happy with you disappearing into the basement for hours at a time, go ahead and load on a single-stage press. For the rest of us, time matters. And volume production is what we want, without a loss in quality. So here goes:

Buy in quantity

Don't buy boxes of bullets by the mere 100. Not even just 250 or 500. If you find a bullet that works, buy 5,000 of them. And buy more when you get down to your last 1,000. I know at least one reader is going to say something like “Five thousand, is he crazy? That's more shooting than I'll do in [fill in a time period].” At only 200 rounds per practice session, 5K is 25 practice sessions. Deduct matches from that, and you're down to a dozen matches and something like a dozen practice sessions. Practice once a

month, and shoot a match once a month, and your “big bullet purchase” is gone in a years’ time. Likewise, buy primers by the 5K. The big advantage is not only do you get a lower unit cost on these, but shipping is less. The shipping costs on 5,000 bullets once, is less than on 1,000, five times. For primers, there is also a shippers’ hazardous substance fee. You pay the fee regardless of whether your supplier ships you a packet of 100, or a carton of 10,000 primers. Buy your powder in 8-pound containers. Again, you’re paying a lower-per unit cost.

Once you’re set up to load, be sure you have plenty of brass on hand. Trying to load in volume, whilst shuffling through the same 200 empties, will make you crazy. Save brass from practice. If your range will let you, pick up abandoned brass. (Be careful to inspect it all closely. Some people abandon brass for good reason; it is worn out.) Sort and clean your brass right away. It takes a couple of hours of runtime to tumble-clean dirty brass. Get it going or done as soon as possible. That way you can spend your loading time loading.

Consider lead bullets

Hard-cast lead bullets are less expensive than jacketed ones. If you’re worried about lead exposure, then a jacketed or even a full-plated bullet can ease your concerns, at greater cost. If you take a few precautions, lead will not be hazardous. However, shipping is what kills you on bullets. Cheap bullets shipped expensively can cost the same as expensive bullets you bought at the local gun shop. The best option, if it is available, is to buy your bullets in bulk from a local caster. A bullet caster in town who lets you pick up could have bullets on your loading bench for half the cost of shipped bullets. If he’ll let you, bring your own containers. Those cute little bullet boxes cost money. Bring a wooden ammo crate, and let him dump his ammo boxes into it. He keeps the boxes, and you need only drop in an index card with the count. As you load ammo from the crate, subtract the loading from the count, and you’ll have a good idea how many are left. Be sure you can lift the box. Smaller wooden crates are better than large ones.

Adjust your dies

When you set up your loading dies, you should be careful to check and if needed, adjust a few things. First, your sizer should be sizing down as far as possible, you should adjust it to not-quite touch the shellplate. Closer, without touching, is better. Then, your bellling stem should be small enough to tightly grip the bullet. Do not depend on crimp to keep bullets in place. The correct bellling expansion is only enough to let you get the bullet in place without distorting it. The loaded round has a distinct “coke bottle” look to it, where the case comes inwards just below the base of the bullet. The diameters differ with each caliber, but are generally .005” to .006” less than the bullet diameter. So a .45 ACP using .451” bullets would have a bellling diameter of .445” to get a good grip. If you do not have a good grip, you get inconsistent ignition, and you risk bullet setback as the loaded round impacts the feed ramp. A bullet that has been set back will have a higher velocity and pressure than one not set back. If you are already running your ammo at or above maximum pressure, a set back bullet and increased pressure could be a bad thing.

Bell the cases just enough to prevent shaving. If you find your bullet-seating die is getting packed with bullet lube and/or shaved bits of lead from cast bullets, you aren’t bellling enough. Clean the die and adjust the bellling station to bell more. Load more ammo and check. If you bell too much you work-harden the brass and it doesn’t last as long. You can also bell so much the crimp die can’t fully iron down the bell. But you really have to work hard to adjust your bellling station enough to encounter either problem.



Ammo cans are heavy but durable. And they seal your ammo against everything but heat.

Once belled enough, then make sure your crimp (you should be using a taper crimp, not a roll crimp) irons the bell completely out. The taper crimp should be enough, but not too much. Crimp also depends on bullet seating. If your bullet has a shoulder on it (as with the H&G #68 style bullet) the bullet should be loaded so the shoulder is out of the case, and not flush with it. Then crimp so the edge of the case mouth is “hidden” by the bullet shoulder. On the .45 ACP, that ends up at bullet diameter plus neck thickness, minus .004”, or .468” at most. Loaders have determined that .467” to .468” is the right crimp for the .45 ACP. The 9mm ends up at .372” You can thus determine that the .40/10mm would be .416” 9mm pistols in particular can be quite sensitive to too much crimp. You may have to do a bit of experimenting to get just enough. One quick test to check neck tension is to press the nose of the loaded round against your loading bench. If the bullet sets back, you don’t have enough. Use a straightedge to check crimp. Slap the round against the straightedge and hold it up to the light. If you can see the neck still belled out, you need more crimp.

Once your dies are properly adjusted, and you have fired enough ammo to know that your setup is correct, mark the dies with a felt-tip pen. Put a mark on the die, locking ring and press top. If they get out of alignment or loosen, you'll be able to tell.

Gauging & Inspection

Loading isn't the last step. You must look at and measure your ammo. The Wilson case gauge, or others like it, is the preferred method. The gauge is a chamber cut in a cylinder of steel or aluminum, machined to the minimum chamber dimensions as set down by SAAMI. Drop each loaded round into the gauge. Then turn the gauge over and let the round drop out. If a round doesn't freely drop in and out, there is something wrong. Some shooters use the barrel itself, taken out of your 1911. However, some chambers are larger than minimum, and will allow a dropped-in round to drop out. But the round may be enough larger than minimum to cause a problem when the chamber is dirty after firing.

Why gauge? You may have picked up a piece of brass that wasn't yours; something bad. It may go through the cleaning and loading process without your noticing a problem. The gauge will let you know. For instance, you may be loading 10mm, and have picked up a piece of 40 S&W brass. If it passes through the loading process unnoticed, when you go and drop it into the 10mm gauge the base will fall out of sight. You'll see it, and investigate.



Lead bullets commonly run a thousandth larger than jacketed for any given caliber. In the .45 ACP this means .4520"



Some calibers can only be created, not bought. For the orphans, the .40 Super, and the rarities, the .38 Casull, you must reload. For more common but expensive calibers like .357 Sig, reloading saves money.

You'll also have a chance to inspect the primers, and if any look odd, you can investigate. At the end of the gauging process you'll have a small

(hopefully small) pile of rejected ammo. Unless they are rejected for things like sideways or backwards primers, you can try them in your practice session. Do they cause malfunctions? If they do not, your gauge is pickier than your gun, and you're good to go. If some do, then the ammo that passed is probably going to be fine. Just keep track and notice if you have a malfunction that is ammo-related. If all your rejected ammo malfunctions, and the "passed" ammo still has malfunctions, you either need a pickier gauge or a gunsmith to look into your malfunction problems.

Once you've loaded and gauged your ammo, box the "passed" ammo into whatever boxes you use for storage, and be sure it is labeled.

Chronographing

You must, in many competitions, have ammo that meets a certain threshold. Known as "Minor" or "Major," failing to meet the declared standard can have bad consequences for your match score. The only way to know your bullet's velocity is to run it over a chronograph. Without it, you're only guessing. A few tips on chronographing. First, keep it far enough from the muzzle to get an accurate read. The skyscreens "see" light. The bullets shadow is what trips the timing circuitry. Muzzle blast can register on the screen. If you have both too close (as in 3 feet from muzzle to first screen) you'll get anomalous readings like 1,800 fps for a bullet supposed to be going only 900. The screens are both seeing the muzzle blast. (Muzzle blast typically starts at 4,000 to 5,000 fps, and quickly decelerate.) If you move out a few feet, suddenly velocities drop to 500 fps for the same 900 fps load. The first screen reads the muzzle blast, the second reads the lagging bullet. I keep the first screen no closer than 10 feet for handguns, 15 for rifles.

To make sure I have enough velocity, I adjust my load so a test run of 10 shots have nine or all 10 of them over the needed velocity. For instance, a 180-grain bullet for the .40 to make Major needs to be going not less than 916 fps. I adjust my load so that a test run of 10 shots has all ten of them over 916 fps, and the average is likely to be on the order of 945-950 fps.

To keep from shooting the screens (a common occurrence) I post a target downrange and use the aiming point. I shoot over sandbags, so my

hands are always in the same position, and the bullets run 6 inches or so over the screens.

Chapter 12

The Complete Trigger Experience

What is the appropriate trigger pull? As with so many things, the correct answer is “That depends.” It depends on what you want to do, where you’ll be doing it, and with how much training or margin for error you have. The top shooters in USPSA/IPSC competition often shoot 1911 and 1911-derivative pistols with trigger pulls between 1 and 2 pounds. Now before you go running off to your gunsmith to get your “instant Grand Master one-and-a-half-pound-trigger-pull” job, consider a GM standing in the start box at a USPSA or IPSC match. He or she has spent at least a couple of years practicing to get there. There is the nightly draw-and-dryfire practice. Years of twice a week or more range trips. Years of a match every weekend of the warm-weather months, and in some locales, each week in the “season” could mean a league IPSC match, a Thursday night steel match, and a weekend match. When the start buzzer goes off, there is nothing in front of him but targets and empty range. If he has an AD (accidental discharge) or an ND (negligent discharge) the worst that can happen is that he’s disqualified from the match. His (or her) pistol was probably cleaned before the match, and closely inspected before being stored in a sturdy case. If it is raining or there is a dust storm, the match will be delayed until conditions are better. If the trigger goes bad, the worst that happens is the competitor loses a stage.

Now consider a Marine in an MEU, shipped off to Iraq or some other hazardous duty station. His 1911 (if he’s lucky enough to be issued one) has a trigger pull more on the order of 5 pounds. He hasn’t practiced nightly draw and dryfire with it. He’s done a bunch of practice before being shipped over, but not like the intensive and ongoing practice the GM got. While there, he doesn’t have the luxury of a clear range with nothing but targets downrange. He may be clearing a building, with fellow Marines in close proximity, and have to shoot past one of his own to “get” the bad guy. An AD or ND might mean more, a lot more, than just a DQ. His 1911 rides

in the holster 24/7, subject to dust, dirt, rain, whatever, and gets cleaned as often as he can get to it. If his trigger goes bad, he or other Marines might lose their lives.

A police officer has it even worse. Not to be callous about the situation, but if in a military context there is a mix-up, and someone gets shot inadvertently, the Marine (or soldier, airman, seaman, coastie, whoever) will certainly be admonished. He or she may even have a letter of reprimand put in their file. As long as it wasn't a fellow member of the Armed Forces, accidents are part of War. However, if a SWAT team member accidentally shoots someone, not only will there be an investigation, but there will almost certainly be a civil lawsuit and damages awarded. If a private citizen carrying on his or her CCW has an accident and someone is injured, they can count on being impoverished.

So, it isn't so easy as to simply list a trigger weight.

As I have spent more time in law enforcement training, and less on the pursuit of getting my Grand Master card, I've come to appreciate heavier trigger pulls. Unless you are, or are on the cusp of becoming a GM, a clean, crisp trigger pull, properly done, will feel a pound lighter than it really is. I've shot winning scores in matches with pistols having five-pound trigger pulls. My advice has changed from the old days. Then, we'd tell people: "A crisp four and a half pound trigger pull." Now, I'd say "As heavy as you can shoot well with, crisp and not less than four and a half pounds."

How the 1911 Trigger works

The mechanics of it are quite simple: a sliding bar, the trigger, pushes on a small lever, the sear, and the tip of the sear is caused to pivot out of the notches on the hammer, thus allowing it to fall under spring tension. The mechanical description belies the timing and how important some parts are. Without a disconnecter, the 1911 would simply fire once, and require that you manually cock the hammer for each shot. Yes, that's right, you can't just take out the disconnecter and have the 1911 turn into a machinegun. If the hammer does not stay at full cock as the slide closes, it will ride the slide down. Without an impact, the firing pin can't be launched into the primer. By sliding onto it, the hammer fails to impart the impact, and the

second round doesn't fire. Is it "possible" for the pistol to fire with the hammer riding the slide down? Yes, and it is possible to win the lottery, too. But highly unlikely. Guns that "runaway" have sear/hammer engagement so marginal that the hammer stays cocked until the jar of the slide closing jolts the hammer off the sear, allowing it to fall and fire.

The Firing Pin Controversy

Why have the firing pin tests in the trigger chapter? Basically because most firing pin "problems" are actually trigger mechanism problems. Someone who installs a very much lighter mainspring, to reduce felt trigger pull, who then experiences misfires, is not having a firing pin problem. And for such a simple mechanism, the firing pin comes in for a whole lot of speculation and incorrect theorizing.

"In the beginning, there was John Moses Browning. And he knew what he was doing...." OK, so you won't find that in the Bible. But if you don't it isn't for lack of trying on the part of some 1911 mavens. The firing pin of the 1911 is of a design known as "inertia-restricted." That is, the return spring of the firing pin is stronger than the mass of the firing pin can overcome in normal handling. Even extreme handling. The firing pin is also shorter than the tunnel in which it resides, so resting the hammer on it does not cause the firing pin to contact the primer, as it does on the Colt Single Action Army cowboy revolver. If you have the hammer down on the 1911, and you strike the hammer spur with a ball-peen hammer, you will not cause the chambered round to discharge. Do the same with a single action army revolver, and it will discharge.

However, nothing but its own inertia, its couch potato tendencies and the spring, keep the firing pin off the primer. And that fills some with dread. Before we go too far into this, let's review just what is going on when you fire or handle a 1911. The firing pin rests at the rear of the tunnel, or against the lowered hammer, pressed there by the spring. When the hammer strikes it, the firing pin is hurled forward against the resistance of the spring, until it strikes and sets off (or fails to set off) the primer. When the slide goes forward, closing on a round, the firing pin bounces around inside the slide, but does not strike the primer. The closing jolt of the slide is nothing like

the impact of the hammer. Such is the lot of a firing pin, slammed back and forth. When the firing pin goes forward, what stops it? When there is a round in the chamber, the primer stops the firing pin. When there isn't, the firing pin stops when the spring is completely compressed.. On many firearms, there is some positive stop. On an S&W revolver, the firing pin stops at maximum protrusion, at a very small amount. "Very small as in less than .020" or twenty-thousandths. A 1911 firing pin doesn't stop until it has either stuck the primer, or the firing pin spring has been completely compressed. Think .200" or ten times the length of the S&W. That is why you can put a 40 S&W in a 10mm chamber (a dangerous thing to do, by the way) and still have it fire. The firing pin will reach.

But it won't reach unless the hammer hits it. So what's the problem? Nothing hinders its progress. So, having experimented with one firing pin safety design back in the 1930s and 1940s, Colt came out a different one in the 1980s, and called the new pistols the "Series 80" models. The firing pin has a physical block, which stays in the path of the firing pin until the trigger is pulled. The idea was not new. Iver Johnson had a whole advertising campaign back in the late 1800's about their design, called "Hammer the hammer." In it, they showed someone striking the hammer of a loaded IJ revolver with a hammer, and it did not fire. (A revelation to those accustomed to a Colt SAA, where you had to carry the piece with the hammer down on an empty chamber.)

Once the Series 80 pistols were unveiled, the accusations flew; that Colt had desecrated the design and were not worthy of carrying on with the John Moses Browning design. That the new parts made it impossible to produce an acceptable trigger pull. That they were just a bunch of fiddly little parts, easy to lose while cleaning, and just asking for problems in wear, function, and reliability. (The last one is true, by the way.) Other makers did not adopt the Colt design. Springfield kept making 1911s without it. Colt muddled on, and gunsmiths figured out how to get a good trigger pull with the parts in place. But no one asked, nor was there an answer, to the question that started it all: Does the 1911 have a problem with the firing pin? Can it discharge just from being dropped?

Well, you've come to the right place. First, let's break the problem down into its constituent parts, and provide a little structure to the

discussion and inquiry. Primers are manufactured with a range of sensitivity. Manufacturers use elaborate testing procedures to test production lots of primers. Basically, a tested primer is held in a fixture. A steel ball is held (usually with a magnet) above it. The ball is dropped, and the primer either discharges or it doesn't. Every manufacturer has a "Max/Min" range. That is, below a certain height, no primer tested may discharge. Above a certain height every primer tested must discharge. If a lot fails one or the other, it is usually scrapped. So, a primer may sustain a firing pin impact below its sensitivity rating, and not discharge. Shooters using AR-15 and M1 Garand or M-1A rifles are familiar with "dented" primers. Those firearms do not even have firing pin return springs, and when you chamber a round, the primer of that round will have a slight dimple where the firing pin bounced off of it on closing. So primers can withstand a certain, small, amount of abuse before they "object."

What pathway of error can cause a dropped firearm to discharge? In the case of the 1911 (other designs may have additional pathways) there are two: the firing pin can overcome its inertia, and strike the primer. And the hammer can be jarred off of the sear, and fall past the half-cock notch and fire. Let us dismiss the second one. In order for the 1911 to discharge in case of hammerfall, the hammer must both come off of the sear, and the sear must miss the half cock notch. Only then can it discharge. (Obviously, a Series 80 pistol will not fire in such a case.) However, the hammer must fall free. That is, it can't fall off the sear, then squirm past the half-cock notch, and eventually get to the firing pin. It must have a free fall. If the hammer is cushioned in its fall, it ends up lacking impact, and fails to discharge. To add further complications, the safety must be off. Or get jarred off during the fall. The thumb safety blocks the sear from moving, and if the safety is "ON" then the sear can't move. What about the grip safety? When it is working properly, it only blocks the trigger, not the sear, which is the other way the sear can move. If the trigger is heavy enough, it can bounce (theoretically) in its slot, and jar the sear. Do you know why so many triggers are aluminum? And why the three-hole design is so common? To reduce trigger mass, and preclude sear/hammer hook wear from the trigger bouncing in its slot and jarring the sear. But that only happens when the grip safety is depressed. If the grip safety isn't depressed,

we have to have a whole basketful of parts doing the wrong thing, before the 1911 will discharge.

Basically, a lot of things have to go seriously wrong in order for the 1911 to discharge when dropped, due to the hammer, sear, trigger parts from jouncing out of alignment or some such mechanical pathway. (Yes, I heard someone use “jounce” while describing a possible method of failure.) that they all do the “right” “wrong” thing at the same time is almost beyond belief.

So that leaves the firing pin inertia. How is this supposed to work? Basically, the mass of the firing pin, if given enough headway, can overcome the spring strength, and go forward. And forward with enough force to set off the primer. Even before I knew much about the 1911, I was skeptical. The forces at work on the firing pin are three: inertial resistance via its mass due to sudden deceleration. Spring resistance. Friction of the firing pin tunnel, spring and firing pin, and the oil or other lubricants used. In order for this to work, the impact must be nearly vertical or dead vertical. Curious mathematics students can construct the equations to describe the decrease in inertial movement due to off-normal impact. Look at it this way: if the pistol is dropped onto its side, there can be no inertial movement of the firing pin. As the pistol is tilted up in theoretical impacts, the force delivered increases until it reaches the theoretical maximum at vertical. In between, the the more off-vertical, both less velocity delivered, and increased resistance due to weight of the firing pin in the tunnel. Too far off vertical and the frictional forces greatly overcome any inertial movement.

If the spring is strong, or the firing pin light, the movement is minimized. So using a new spring, or extra-strength spring, and a Titanium firing pin, reduces the inertial movement.

Increasing lubricant viscosity reduces inertial movement. And this is our first negative so far: using an oil or grease that is too thick can reduce reliability in some environments, so it is not a viable option. shortening the firing pin would reduce protrusion, and reduce the likelihood of inadvertent firing. It also would increase the likelihood of malfunction in a severe environment. On the range you might reduce firing pin length and not notice a problem. But in a dusty, muddy, frozen or other environment, a shorter firing pin could pose a problem. So we won't go there.

If we maximize the variable towards failure, we would; use a steel firing pin and an old firing pin spring. We would use the lightest possible lubricant (no lubricant at all would decrease inertial movement) and we see to it that the pistol tested is dropped vertically, or as close as we can manage. We would test a pistol in its full-up weight, a steel frame with a loaded magazine. We would stop it by dropping it on either a concrete or steel floor, to maximize the deceleration. And as a final boost, we'd use the most sensitive primers. Competition shooters have roughly and generally ranked primers by sensitivity, as a light hammerfall is conducive to precision shooting. Federal primers are considered to be the most sensitive. In the interests of safety, we would use only a primed case, and not loaded ammunition, in the test. There is not point in having our "Eureka" moment just before having to dial 9-1-1 on the cell phone.

The Test of Concept

In order to begin, we needed a test gun. My friend Ned Christiansen, noted gunsmith and a member of one of the most select groups extant, a Dual Master Blaster from Second Chance, came up with a test gun. It was an experimental and hacked-on parts gun, with many sections machined away, various tests performed, and one step ahead of the smelter. However, the firing pin tunnel and its parts were un-touched. The slide had its original firing pin (steel) and spring in place. Without testing it on a bench test rig, we had no way of knowing how strong or weak it was, but it was not an extra-strength spring, and it was not new. Ned machined a weight to fit in the muzzle that did two things: it brought the pistol up to the weight of a full-loaded Para-Ordnance hi-cap pistol, with 15 rounds of 230 grain ammunition in the magazine, and it kept the pistol muzzle-down as it fell. The weight of ammunition can be a significant portion of the full-up weight of a test pistol. A lightweight Commander tips the scales around 28 ounces. Eight rounds of 230 hardball adds up to a little more than five extra ounces, a fifteen percent increase. A heavy steel-framed Para can run 48 ounces. Fifteen rounds of ammo adds almost ten ounces of weight. The ammo counts.

We dropped the test pistol onto a concrete floor, on an indoor range, during a law enforcement 1911 armorers class in which we were teaching.

With the weight in place, we chambered a primed empty case. We started the dropping at waist height, and as the primer failed to show any indent we gradually raised the drop height. We could not go higher than about eight and a half feet, as the ceiling stopped us. We dropped the pistol until it was clear that we had failed: the primer never discharged. When we were done, the test pistol was in even sorrier shape, and bore the marks of many impacts with the floor. But the primer was untouched.

As a beginning, it was not rigorous, and not repeatable. But it did give us a handle on what the variables are: that getting a 1911 to discharge was not going to be an easy thing. While discussing this test with other gunsmiths, I happened to talk to Bruce Gray about. Bruce worked in the old Devel shop, and remembers tests done with dropped 1911s. The guys at Devel built a test rig to drop them straight on the muzzle, he recalls that it took something like ten feet before they started seeing primers go off, but didn't take any notes or photos back then. Hmm, ten feet. Sounds like a challenge to me. The trick is getting it to fall directly in the muzzle, and with the full acceleration ten feet affords.

Why the “problem?”

Basically, I see two reasons for the supposed problem. One is attorneys. Hey, I know attorneys, I'm related to them, I've worked for them, I even admire some aspects of what they do and aspire to. If you want to see the epitome of what an attorney should be, catch the movie “A Man for All Seasons.” Basically, Paul Scofield plays Sir Thomas More, who finds himself in disagreement with Henry VIII. He disagrees with the King on the King's break with the church, and the divorce the King wishes to obtain. Why? The King has no legal authority for his action. Great stuff, but I digress.

If something goes wrong, the modern legal opinion among many is that there must be some fault. No action or outcome can be allowed to be unassigned a cause, and fail to have fault or blame handed out. There is no such thing as an action beyond the opinion and correction of the legal system. Philosophically, it is nonsense. There are things simply beyond our ability to understand or correct. However, as a legal matter it allows anyone

to seek redress for anything. Yes, the old adage you may (or may not) have heard is true: anyone can sue anyone over anything. Getting a lawyer to accept the case is one problem, and not being tossed out on your ear by the Judge is another.

The second part is the understandable desire for some (or many) to avoid consequences for trivial or seemingly trivial actions. If someone is handling a firearm, and for whatever reason causes it to discharge, there can be trouble. In the military it can mean fines, loss of pay, loss of rank, or even discharge from the service or prison time. If at all possible, some or many would immediately drop the pistol, and when asked, reply "I dropped it and it went off." Enter the legal system. It went off, someone is at fault. What? It was dropped and went off? It must be a faulty design. Faulty designs must be corrected, usually by punishing the designer and maker.

Never for a moment does anyone consider that the design may be entirely correct, and what is needed is better training. Holy cow, if you train more, you risk more droppages, and the darned things go off when dropped. You're just asking for more trouble, aren't you?

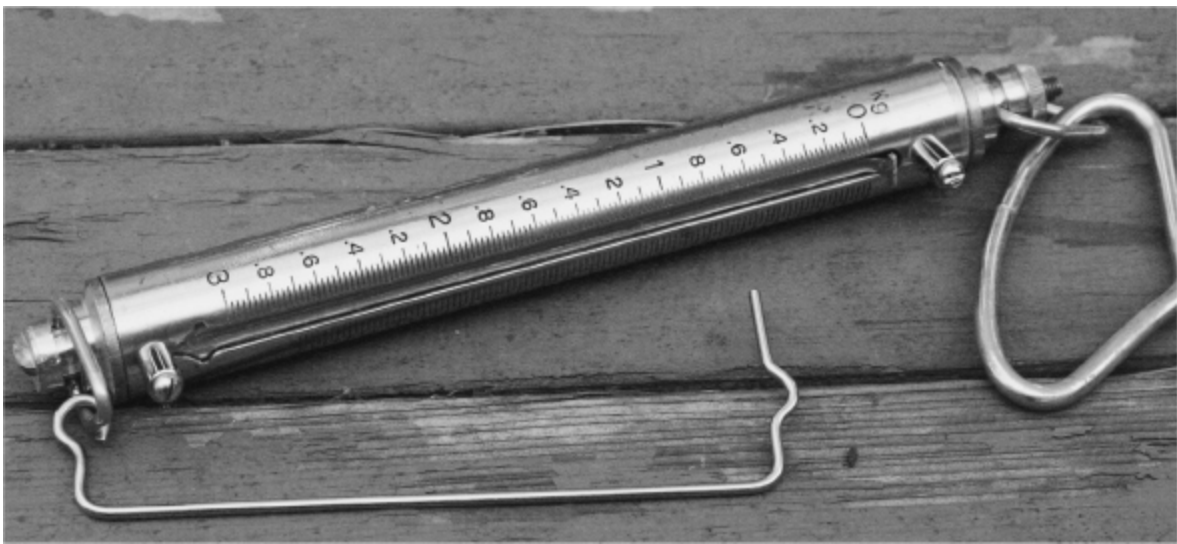
Let's change the object of our attention from a sidearm to a knife. If you drop a knife and as a result of its falling, bouncing and clattering someone gets cut, do you blame the knife? "Darned thing was sharp. If it had been dull when I dropped it I wouldn't have cut myself." Uh-huh. And just how useful is a dull knife? What I recall from classes in the Cub Scouts and Boy Scouts was "A dull knife is dangerous and more likely to cut you." Train more. Drop less. Don't expect some nameless engineer (and the equally nameless lawyer flogging him) to provide you with a design that will keep you safe even if you do clumsy or stupid things.

Now that's not to say I'm giving all designs a pass. One older one is the original Colt single action revolver. When at rest, the firing pin would rest directly on the primer of the chambered round. Anything that bumped the hammer could fire the round. Thus old cowboys (and modern cowboy action shooters) carried the gun with five rounds, hammer down on an empty chamber. Why is this different? You can rest the hammer of a 1911 on a loaded chamber and belt it with a ball-peen hammer and not have the round go off. The firing pin is spring-loaded, and held away from the primer.

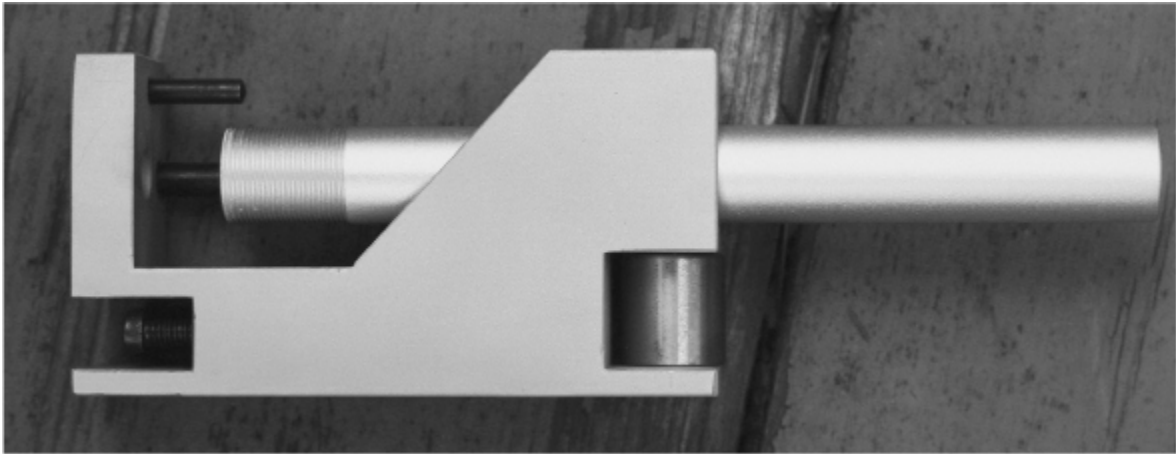
Now that we've solved the firing pin problem, let's consider trigger pulls again.

One option to the "clean and crisp" trigger pull is something my friend Mas Ayoob came up with: the semi-doubleaction trigger pull. Instead of cutting the hammer hooks relatively low, and letting the sear spring off without prior movement, he suggests (and has had done) tall hooks and polished surfaces. The idea is to build in "creep" but controlled creep. Most creep is bad. A creepy trigger can be felt to have the sear nose jerking and grating across the hammer hooks. What Mas is suggesting is that the hammer hooks be left all, and polished so the sear moves but you feel the movement and not the surfaces. In use, the trigger feels "spongy" but not in a bad way. It feels kind of like a very short revolver action, or the Glock New York trigger. You keep pressing, and you feel the trigger compressing, and eventually the 1911 goes off. As a trigger for use under extreme stress, it has a lot going for it. Under stress, you can feel movement more than you can feel the weight of a trigger pull. What you need to do to use it is get used to it.

And there is always the heavier-than-target trigger pull. I've shot groups that kept all the hits inside the A zone of a USPSA target at 50 yards, with triggers that would hold six and seven pounds. What matters is that the trigger be consistent. Not four pounds this time, seven the next and three the time after. Or scratchy, gritty and jerky.



Use a set of weights, or here, a recording scale, to determine the pull weight of your trigger.



The Brownells/Yavapai sear inspector gives you a 25X view of the hammer hooks and sear nose.

Weighing

You can use the standard NRA weights. They are simply dead-weight disks that you hang off the trigger and add as you need to, until the hammer falls. They are classic and unbreakable. Another is the Brownells recording trigger pull. Using a spring-loaded body and a sliding scale to record pull, you simply hook the arm over the trigger, pull until the hammer falls, and then note the scale. The NRA weights only work in pound, half-pound and quarter-pound increments. The Brownells will record in fractions of an ounce.

Inspecting

As I was wrapping things up, Brownells sent me their Yavapai sear/hammer inspection fixture. Wow. As a working pro I many times wanted to see just what was going on. However, it was always difficult to get any kind of a view. Well, the 25X magnification of the fixture, and the location directly to the side of the hammer/sear hooks lets you get a perfect view. Now, if you are only going to fit one set of hammer and sear to your one 1911, then spending for the fixture doesn't make sense. But if you have

a bunch of 1911s, or you plan to take care of installation or maintenance on a bunch of them, then this fixture is for you.

Chapter 13

Gunsmith Speak

Every time I write about gunsmithing, I get myself in trouble with other gunsmiths. We all have the same amount of time, and that time is best spent in the back of the shop working on guns. A gunsmith who spends an eight-hour day doing nothing but working, fitting, testing and verifying is a happy gunsmith. However, customers expect more. And they should. They expect to be able to consult with their gunsmith on their gun. After all, it is your 1911 that you're handing over. You have a right to talk things over and make sure your 1911 will be made just as you want it to be. What you can't expect is an inordinate amount of handholding. That's what makes gunsmiths crazy. You want an accurate gun? No problem. You have a preference for this or that barrel? Fine. What you will use it for is relevant. A Bull's-eye gun, a Pin gun and an IPSC gun have similar, but slightly divergent needs. And a 1911 for walking the streets of Fallujah is something else. What your gunsmith doesn't need is a half-hour devoted to your experiences in loading and shooting a dozen different bullets, loads and calibers. Tell him what you want, but don't be long-winded about it. He has guns to work on.

There are things in gunsmithing terminology that are absolutely precise. And there are gunsmith terms that are maddeningly vague. The results of accuracy are precise. If you provide your gunsmith with a supply of ammunition, and tell him "I expect this 1911 project to deliver groups less than X number of inches at twenty-five yards when fired from a Ransom rest, using this ammunition" then you have stated a precise expectation. If your gunsmith tells you "It needs to be throated" then you have a choice. You can ask him just what the heck it means to "throat" a 1911, or you can say "OK" and move on to the next item.

The level of detail the two of you need go into depends on the level of work and the expected outcome. The proper method involves what every gunsmith dreads: counter time. Time to discuss what you need or want,

what the solution might be, and how long it will take. If you are simply turning your 1911 over for a package job, then you can read what the package consists of, and ask details about one or another. If you're handing over a pistol for a "bespoke" gun, a one of a kind that will be an heirloom piece, then you'd better nail down the details of everything. If you don't, you're likely to be disappointed after years of waiting and thousands of dollars of expense. How do you conduct the conversation? Simple, you keep in mind three things: "See" "Expect" "Standards".



You must be clear about what you expect. In the 1970s this was a "beveled" mag well.



In the 21st Century of 1911 shooting, this is now a beveled mag well.



If your 1911 is failing to eject, say so. Don't simply ask to have the ejection port lowered, and expect it to solve your problems.

See

What do you see? What do you feel? What functions or malfunctions have you observed?

When you are turning over an unreliable 1911 (hey, it happens) don't diagnose the problem. A diagnosis is a specific word used to describe the process of analyzing a problem and listing the likely causes. A medical doctor diagnoses an ailment by considering the symptoms and comparing the observed symptoms to the lists of symptoms experienced for various diseases. He or she spends a lot of time in school learning what means what, and coming to a proper conclusion. And the lists of what symptoms mean which disease have been established through decades of experience and refinement.

Tell your gunsmith what you have seen or observed. One example might be brass ejecting into your face. If you drop off your pistol and tell the gunsmith (or counter person at the gun shop) "the ejector is too low, replace it with a taller one" then they'll do it. However, if your problem stems from a different cause, the higher ejector may not solve the problem, and you'll be back. You and the gunsmith will become more frustrated until he or she comes out and asks you point-blank "What is it doing wrong?" When you tell them it is ejecting empties into your face, he can then look for the likely culprits, and test or deal with them.

If your 1911 is shooting large groups, know the distance, the ammo, and how you are shooting. Unless you are a Master-class shooter, do not expect the gunsmith to take too seriously your protestations that it isn't shooting accurately. I know, I know, we're all superb shots, and any miss is not our fault. But if you really want to know accuracy, you have to shoot in a machine rest. Once you do that, or have the best shooter in your club shoot a group or groups off of a sandbagged rest, then you can explain about lack of accuracy. Of course, you need not say anything about old accuracy if you're simply getting a new barrel installed.



A good barrel, well-fitted, will shoot well. Adding a full-length guide rod is not the solution to accuracy. For duty use it is a bad idea. Discuss what you need and expect.



A Swensen safety should be free of sharp edges. If it bites you, find out where before insisting on a de-horning.

Tell him or her the problem as a problem, not a likely course for a solution. "I'm getting bit on my shooting hand" is one thing, but "Take the sharp edges off the thumb safety" is another. If the thumb safety really is the problem, great. If not, you'll be back. Show where you're being

“bitten.” Show your grip. It won’t take long to figure out what is biting you. If your pistol lacks accuracy, be ready with ammo details, range, method and results. If your accuracy problem is a result of the sights being off, or too small, “accurizing” the pistol isn’t going to change things much.

Seeing is mostly a de-bugging process, where you list the malfunctions, and request corrections. But it can also be applied to custom changes. If you like a particular checkering pattern, say so. Don’t just say, “Checker the frontstrap” and expect it to turn out just like that gun you saw in the latest issue of whatever magazine you happen to be reading. Bring the photos along. Don’t be afraid to draw on the frontstrap with a china marker, if you want precise locations for borders, edges, filigree and the like.

Expect

What are your expectations? Taking a loose surplus pistol, and making it a super-tight and smoothly fitted gun, with the original barrel, isn’t going to improve accuracy much. If you’re getting things done in stages, and can’t afford a new barrel, but can afford the slide-to-frame tightening (the backwards way to do it, by the way) then get it tightened. But don’t expect your pitted surplus barrel to shoot much more accurately. Getting your trigger reduced from eight pounds and gritty, to four pounds and clean, will improve your shooting and scores. But once you have that done, you will not see a similar increase in your scores by dropping the now-four-pound trigger pull to two pounds. What you will see depends on the particular thing changed. Some improvements will show a fractional improvement in your performance (the first change cuts the bad variable in half, the second only takes a quarter of the remaining half, etc.) while others will not be so beneficial. Real improvement usually involves addressing all the variables. Lets take the falling plates of the Bianchi Cup as an example. It takes a Master shooter to down all 48 of them. If you go and shoot the course with a crusty surplus 1911, with the eight pound trigger pull and pitted bore, you might only get twenty of them. If you improve the trigger pull alone, you could get six to eight more. If you only replace the barrel with a Bar-sto Match barrel and leave the trigger alone, you could get six or eight more. Do both, and you can’t count on getting both improvements. But even if you did, that leaves you at thirty-six. Now change the tiny sights, and

you're up to forty or forty-two plates. How to get the rest? A year of weekly practice, two hundred rounds a session, until your eye-hand coordination and mental skills are up to the task. No equipment will replace that.

If you want a specific item, say so. If you say "better sights" your gunsmith doesn't know if you want Novak, Bo-Mar, King or simply 1970s-era Colt factory sights. Tell him. Tell him what you want in checkering, stippling, custom looks or features. Bring photos or drawings if you need to. The gunsmith can look at them and tell you if he or she can or can't do it. My friend Ned Christiansen has worked out some pretty slick methods of treating the 1911. If you take a photo of a gun with Ned's "Conamyds" to another gunsmith, he or she is likely to scratch their head and tell you "I have no idea how he does that. Maybe you'd better have him do it." If you can't abide the Bo-Mar installation where the rear of the sight overhangs the slide slightly, say so. If the gunsmith tells you "That's the way it is done" then you have a choice: get it done there, or go someplace else.

In the modern consumer world, many are familiar with the phrase "The customer is always right." (TCIAR.) However, many do not know what it really means. It does not mean that any request, no matter how unreasonable, must be incorporated into a project. If someone drops off a rattling, soft-steel surplus 1911 dating from WWI, asking for a barrel in .460 Rowland to be installed, the customer is not right. The gun isn't up to it, the slide will quickly peen, and the result will be a damaged slide and barrel at the least. Telling the gunsmith that you want a new gun, up to the task, fitted with a .460 Rowland barrel, but un-comped, is also not right. The comp keeps the gun from beating itself to death. So what does TCIAR really mean? It means that what the customer wants, they'll get one way or another. In the earliest days of IPSC shooting, the fashion was to shoot a gun with a white frame and a blued slide. Back then, it meant a hard-chromed frame and blued slide. That was what customers wanted, that was what gunsmiths built. When customers wanted optics on their 1911s, gunsmiths had to figure out a way to make them stay on. Now, many "tactical" 1911s are built with baked-on epoxy finishes, often black, gray or green. Baked-on finishes aren't new. They first appeared in the early 1990s, and shooters had guns done in red, pink, blue and other bright colors. The finish wasn't up to the wear-and-tear of competition shooting, and shooters

soon abandoned them. The makers of the finish improved the product, so when tactical guns came into vogue, the new finishes were tougher, and better able to stand up to use.



Choose what you want with use in mind. If you get your gunsmith to mount a sight like this, don't be put out that you can't shoot it in the local IDPA matches.



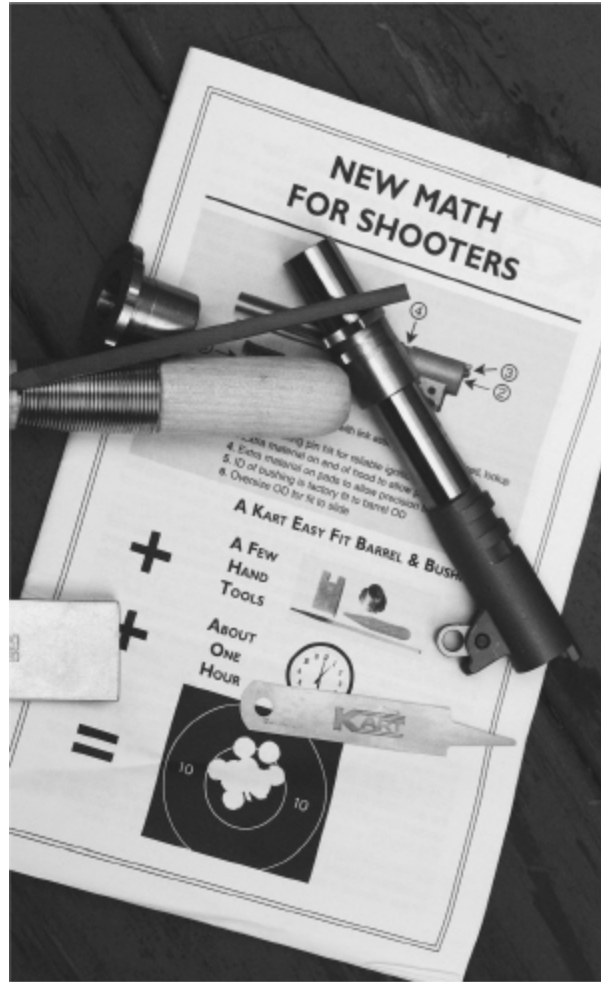
Perfect checkering won't improve your scores any more than skateboard tape will. If you want art, pay for it, but don't expect art to trump practice.



Some gunsmiths are craftsmen, and some are artists. Insist on seeing samples of work.



Not all sights are the same. But better sights will let you shoot higher scores.



A good barrel, badly fitted, is wasted money. If you aren't confident of your own abilities, pay an expert to fit your barrel.

If you want your built gun to perform to a certain standard, say what that standard is. Obviously, if you're having a gun built for the Bianchi Cup then you need something that will hold inside the X ring out to fifty yards. If you expect that, tell the gunsmith what load you'll be using (even provide some) so he can be sure. If you expect 100% reliability, than you'd better conduct a fair test. Don't use your brother-in-laws reloads, feeding them from gun show "Two for Five Dollars!" magazines. Use factory ammo, and good magazines.

Do not expect more than the potential of the starting package. If you're turning a heavily used Wilson Combat built on Wilson frame and slide over to your gunsmith for an overhaul, you can expect a lot. Once he tightens it

up, and if needed he replaces the barrel, he need only clean up the dings and scars you put on it in the decade (or more) of use. If you tell him to “clean up the checkering” you can expect every diamond to be perfect. After all, he isn’t starting from bare steel. There is checkering already there. Ditto the slide to frame fit. It should already be good, even with lots of shooting. He needs only to tend to the wear. Had he to start from a base gun, you’d be looking at one or more of: higher cost, longer build time, or less results at the end.

Tools for yourself

You cannot expect your gunsmith to do everything. At least not without paying a whole lot of money, and without a whole lot of inconvenience. For instance, if you plan to turn your gun over to your gunsmith after every practice session for cleaning, you’d better have won the lotto. You can’t afford it, otherwise. So you’ll have to strip and clean it yourself, and for that tools come in very handy. Yes, you can use the gun itself to take some things off, but not all. And not everything that comes loose can be tightened using the parts of the 1911 itself.

The first tool you should know of comes from Caspian. It looks like your basic pocket multi-tool. But the pliers open up to reveal a bushing wrench. (The handles are coated, too, for a non-slip grip.) The screwdrivers and punches inside the handles are the correct sizes for the screws and pins on your 1911. There isn’t much uglier than a 1911 with the grip screws mangled from someone “making” the wrong screwdriver work. And those allen-head screws so many shooters like on their grips? They work fine until the (inevitably) lost allen wrench can’t be found. The pliers have wire-cutters built into the jaws, and there is a small knife blade and a file inside the handles as well. This isn’t the tool I’d want for regular bench work on 1911s, but as part of the gear bag to a match, or for field maintenance, it is the thing to have. Were I in charge of training Marines or SWAT cops, and issuing 1911s to them, I’d insist that this be a standard part of the issue gear. The compact size lets you pack it in a pocket, in the provided belt pouch, or best of all, in the pocket on large knives sheath, meant for a sharpening stone. Forget the “romance” of sharpening your bowie knife by the campfire between missions using the fiddly little stone that fits the pocket,

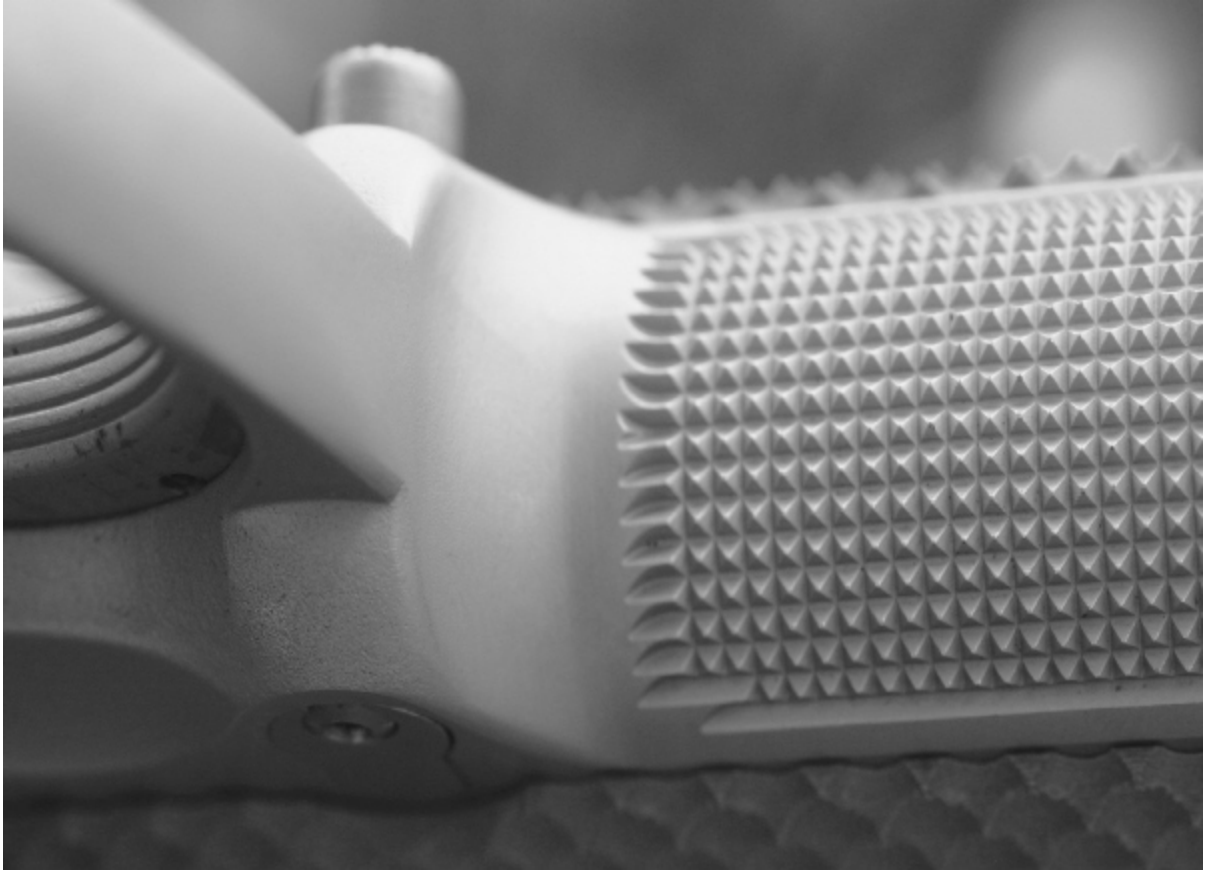
and give me a means of getting the gunk out of my 1911, collected during the oh-so-fun session wading that river earlier in the day.



If you simply say “combat sights” you could end up with almost anything. Here is an older, out of production Novak, in front of the Novak we all know.



Stippling will serve as well as checkering for a non-slip grip. There is no going back, so be sure it is what you want.



Perfect checkering costs money. Ugly checkering is, well, ugly. If you're going to get Checkering, save up for perfect.



Anyone can whack a dovetail in a slide, using a milling machine. It takes skill and practice to make it look like the sight grew with the slide.

For regular bench work, familiarize yourself with two words: “Brownells catalog.” You can go crazy (and spend those lotto winnings) reading the catalog. Me, I gave up a long time ago. I can’t own everything in it, so I just look for what I need and try to ignore the rest. But I am partial to kits. Rather than buying individual tools, if a kit has several of what I need, I get a kit. Years of keeping tools in drawers (or I’ll admit, out on the bench) taught me that keeping tools in one place is very useful.

To remove the thumb safety is no big deal. You make sure the gun is unloaded, you push the safety to the middle, in-between position, and you lift it out of the frame. (You may have to do some wiggling of the safety to get it free.) Getting it back in can be a hassle. You have to push the plunger back into the plunger tube, and that can be a real hassle. Rather than use your knife, and risk scratching the frame (done it) or cutting yourself (done

it) or launching the spring and plunger (done more times than I care to count) get the Marvel plunger depressor tool. And when struggling to get the sear and disconnector back in place, use the Brownells alignment rod. To remove the mainspring housing pin, don't knarf the pin or the frame using a flat punch of the wrong size. Use the (dare I say it?) Brownells mainspring tool. Grip screws and grip screw bushings are always a potential hassle. And on some 1911s they are a real headache. Use a properly fitting screwdriver to tighten the screws, and use a bushing driver to tighten the bushings when needed. The bushing driver is one of those tools you don't need until you do. And when you do, nothing else will suffice. I've seen a bunch of grip screw bushings mangled through the years, mangled by owners who tried to use a standard screwdriver to tighten the bushing. When your bushing comes loose, unscrew it. Degrease it. Put Loctite on the threads and re-tighten it. Let it set, then oil the screw threads and install the grips. Resist the temptation to tighten the grip screw bushing "really tight" to keep it from coming loose. You'll strip the threads and be worse-off than before you began your "fix."



Lifting the frontstrap radius is a small thing, but it helps your shooting. To do it without looking like a rusty rat-tail file was involved takes a pro.



Man is the tool-making animal, and tools keep your guns looking good despite repeated disassembly and cleanings.



The Caspian tool is a one-stop 1911 tool center. You must have one or two.



The little pouch for a sharpening stone is better used to carry your Caspian tool.



A bushing wrench and bench block round out your 1911 tool collection. You can do without, but they both make life so much easier you are better spending the few dollars they cost.



It would be a shame to spend a whole lot of money, time and anticipation on a matched pair of Yost-Bonitz 1911s, and then scratch them up because you were too cheap to buy the right tools to keep them clean and in good running order.

You of course need a barrel bushing wrench to disassemble the top end. Even if you have a bushing that was made to be finger-tight and can be disassembled without a wrench, get a wrench. The wrench makes it so much easier. You can get the Brownells plastic one, or the sturdier anodized aluminum one.

A lot of these items come in the Brownells 1911 Field Kit, along with a mat to keep parts off the ground. I'm a big fan of having dedicated toolboxes so when you need something it is there, in the box. After spending entirely too much time working in a messy environment, with parts and tools strewn all over the bench, I find life much more restful with tools and parts in boxes.



Get a cleaning kit, and use it. Many malfunctions gunsmiths encounter are simply a matter of poor maintenance.

A Quick Note on Finishes

We are in the golden age of custom finishes. And in a time when the choices are so much in flux that suggesting any in particular would be rash. There will probably be new ones unveiled in-between the time I send this off to the Editor, and it hits the bookshelves at your favorite bookstore. With that in mind, let's take a look at what your choices are.

Traditional

Here we have good old bluing, Parkerizing, and I hate to say it, what used to be new hi-tech finishes such as hard chrome, Robars NP3, and Armaloy. Bluing hasn't changed since steel was invented. The newest methods are a bit tougher than the ones we're used to, but it is still the least-durable finish available except bare steel. Parkerizing is tough, traditional and currently not in favor. Those who used to go with Parkerizing are now flocking to one of the baked-on polymer finishes. The various plaitngs are still in wide use, and serve a very useful function. I would not hesitate to have a 1911hard-chromed, NP3'd or Armaloyed. In fact, if I was going to build another hard-duty gun, that would be one of the interim finishes I'd select.

New & unusual

The color case-hardening done by Olympic Arms is quite the sight. After seeing it on the test gun, several of my testers wanted to know if they could get the same done to their 1911s. Unfortunately, Olympic only does it to their guns. However, I'd bet if you went to Doug Turnbull, he'd be happy to do the same to yours.

Polymer finishes

The old paint jobs just didn't hold up. Back in the late 1980s and early 1990s we saw some guns done in "power coat." Powder coat is sort of a paint application. The difference is involved. Instead of degreasing the part and then spraying it with paint, in powder coating you degrease the part then attach it to a frame that gives it a small electrical charge. Then you spray a fine powder of your coating at it, charged opposite to the part. The dust settles on the part in an even layer. (As the powder coats it, it decreases the effective electrical charge, thus causing dust particles attracted to the part to seek the thinnest part of the coating.) Once coated, the part is baked, fusing the dust into a solid coating. The advantage of powder coating over paint is simple: you can incorporate bonding agents in the powder mix that you couldn't dissolve in a paint solvent. The disadvantage is that it just isn't durable enough for firearms. Those who had their guns coated found the coating chipping off under hard use.

The new finishes are much different. Rather than being a paint-and-binding-agent mix, they are epoxy mixes. They are heated to cure them, and once cured much tougher than the old powder coat. I suspect that there are perhaps a half-dozen mixtures in common use, with each finisher buying a 55-gallon drum of their favorite and then mixing in whatever dyes they favor for color matching. After all, it takes a lab and a bunch of chemists to come up with a suitable mixture, then a production plant to make the stuff cheaply. You can't just whip this stuff up in your basement.

The application process is relatively simple to explain, just fussy in the details. The 1911 and parts are disassembled, and the surface prepped by whatever method the finisher deems appropriate. Some finishes require a surface prep. The finisher might suggest or insist on a brushed or very fine bead-blasted to ensure proper adhesion. Some platings or hard chrome applications do better on a slightly rough or matte surface than they do on a high-gloss surface. Some applications simply require a degreased and slightly warmed surface. Ask your plater/finisher if they need some surface prep. I know gunsmiths who are very particular about where they ship guns for finishing. "After I've done all the work to make it look exactly as I or the customer wants, I don't want some plater with a sandblasting cabinet to make the plating stick." One gunsmith told me. "If it doesn't stick to

polished steel, I'll find something that does." So your gunsmiths preferences can come into the equation too.

The ultimate hard-duty gun

Were I building a gun for use in bad places, and I had enough lead time, I'd pull out all the stops. First, I'd have a gun built with whatever bells and whistles I needed or wanted. I'd be torn between carbon steel and stainless. The only reason I'd go with carbon is if my coating plans would not work on stainless, but most will. Build a stainless gun, debug it, dehorn it, and make sure it works 100 percent. Then send it off to Robbie Barkkman of Robar for an NP3 finish. Once back and checked for function again, off for a flat black or O.D. polymer finish. The trick is making sure the polymer finish will properly adhere to NP3, hard chrome or Armaloy. If I find that it doesn't (even the people who coat guns can't anticipate all the variables) then a solid color like black or O.D. Green can be touched up with a can of Rustoleum. I'd have a batch of magazines (CMC PowerMags or Wilson 47) also coated, same color.

Once done, its off to do good works. But the finishes are not applied until the testing is done. Nothing hurts your wallet more than having to strip the old finish off, make a change and re-apply the finish. Well, bad work t begin with hurts more, but we're assuming you've gotten good work.

Why new finishes?

Why not stick with the good old blue/nickel/Parkerizing paradigm? The stated reasons are cost and customer preference. If a manufacturer offers guns in stainless, he doesn't have to have dual parts/product inventory of blued and stainless. And as for Parkerizing, a stainless gun with a tough, backed-on polymer or epoxy finish is just as rust-resistant (or even a bit better) than parkerizing. The customer preference for stainless is real, but not everyone wants a stainless gun. However, the real reason, while it has as much to do with cost as the others, is more interesting: The EPA and NIOSH. Bluing requires caustic salts and various acidic "pickling" solutions. Nickel requires acid prep baths, and then tanks of metal solutions, copper and nickel. (A nickel-plated handgun requires a copper base for

proper adhesion. Without it, the nickel flakes too easily to be durable.) Parkerizing requires multiple tanks of phosphoric acid, with metal dissolved in them. And all require chemical degreasers, cleaners, wash tanks and oiling baths. That's a lot of tanks full of solutions that are bad for the employees, the local flora and fauna, and the water. All of them must be checked, maintained, the solutions properly disposed of when exhausted, and every bit of it accounted for, recorded and certified.

A lot of work. A lot of cost. Better for the maker to simplify things by going with stainless and bake-on synthetic finishes. The small volume of products requiring Parkerizing or bluing can either be done small-scale in house, or (as some makers do) out of the country and shipped in with the finish on but final assembly and fitting yet to do.



Armory Kote is just one of many new finishes available.

Chapter 15

Grips

The 1911 needs grips. Oh, you can use it without them, and your hands won't suffer too much. It isn't like a Smith & Wesson pistol, a Sig or some others, where if you fire a magazine it will look like some maniacal puppy has just used your hand as a chew toy. And some versions of the 1911, like the Caspian hi-cap and the Par Ordnance hi-cap are commonly run without grips. But the standard, single stack, usually-found-in-.45 1911 needs grips to be comfortable to shoot.

But what kind? And what size? The typical military and old Colt grips were somewhat flat. The grips tapered down to as thin as they could be and still stand up to use. Since then, we've had quite a few changes in grips, but the decision is still the same: thick or thin.

Thick

Thick grips are more durable. They also distribute recoil forces over a larger area. For those shooting large calibers with heavy recoil a larger grip, or area, can be vital. For instance, a narrow steel buttplate on a .30-30 is something you can live with. The 170-grain bullet at 2100 fps generates a power factor of 357. The same buttplate on a .30-06, where a 150 may be going 2700 fps, or a 165 going 2600 fps, with power factors of 405 and 429 respectively, can be a bit much of extended shooting. Go even bigger, say to a .35 Whelan, with a 225-grain bullet going 2400 fps (a 540PF) and shooting it could bring tears to your eyes. Except that handguns aren't rifles. And the differences in power between various loads of the .45 are hardly enough to make grip shape and composition matter. Given the same load and different grips, you'd be hard pressed to notice a difference in recoil. Accuracy and fast shooting is another matter. Thick grips make the 1911 grip shape less flat and more round. Indexing a pistol during recoil with a round grip can be a problem. Many shooters don't notice. Some

don't notice because it doesn't move in their hands. Some don't notice because their shooting speed is so slow they have re-adjusted by the time they get the sights on the target again. And some just aren't paying very close attention to the sights anyway, so things like grip shape doesn't really matter.



Chip McCormick only offers a few types, but they are all good looking.



Kim Ahrends makes wood grips in a dizzying variety of exotic hardwoods.



The Alumagrips are so good they come standard on the Guncrafters 50GI.



You can get Alumagrips with flattop checkering, smooth or sharp checkering.

Comfort is noticed, however. And anything that makes the shooting experience less comfortable is a bad thing.

Thin

Thin grips give a definite indexing plane. With fat grips, you feel like you're holding a piece of lumber, and you can tell from how the corners hit your hand exactly where the flats (and thus the muzzle) are pointed. Thin grips, however, do concentrate the recoil in the narrow section of the frame, the grip safety and mainspring housing. For some who are recoil-sensitive, the increase of local pressure can be too much. For most shooters, recoil is something noticed only in passing, and the results on target are the goal. Thin grips also are more fragile. Now if you simply leave the grips on the gun, and never take them off, weak grips are hardly a problem. But if you

take them off from time to time to clean the gun, fragile grips can be broken simply from being dropped.

Wood, the classic

I love wood grips. I always have and I probably always will. In the event I want good looking grips, I have two choices: Kim Ahrends or Chip McCormick. I go to Kim if I want exotic woods, or custom checkering patterns. I go to Chip when I want (or need) the thinnest grips possible. Kim makes grips in wood you've never heard of, and offers sizes, colors, checkering patterns and other decorations in enough variety to make your head explode. Chip doesn't offer nearly as many options. However, he does not make grips in ugly wood. You can't pick from seventeen types of exotic Malaysian hardwoods, but what you get will be nicely figured, properly checkered, and certainly worth bragging about.

But besides thick and thin, we have other options: aluminum, carbon fiber, and what I call "integral friction."

Alumagrips

The idea is simple: aluminum is tougher than wood, although the grain isn't as nice. (Then again, I've seen wooden grips so devoid of grain that they might as well have been aluminum.) In defense of aluminum, you can anodize it to a whole raft of colors, it doesn't ding up as badly as wood does, and the checkering possibilities are infinite. Alumagrips has a neat-o web site, where ordering your grips you see what the results are. Want to change colors? Click it and you'll see the results. The holdup to aluminum grips used to be cost. Back in the old days you could cast them (at a huge cost for a mould and one model, period) or you could machine them. Without CNC machines the fixturing and labor needed to turn out grips was large. If the shooting world wasn't ready for aluminum grips, you'd be in a bad way. With CNC, it can be done quickly and easily. And with the flexibility of CNC programming, Alumagrips can offer close to 50,000 possible combinations. Just ask them.

Located in Mesa, Arizona, right outside of Phoenix, Alumagrips makes your grips for you. The process is simple. Peruse the site and decide what

you want. Use the interactive part of the web page to “assemble” your grips. Then order. Your grips will show up in short order. You can have a variety of colors, checkering patterns, you can even have your initials engraved in the grips. The grips that came on the Guncrafters 50GI are Alumagrips.

Carbon Fiber

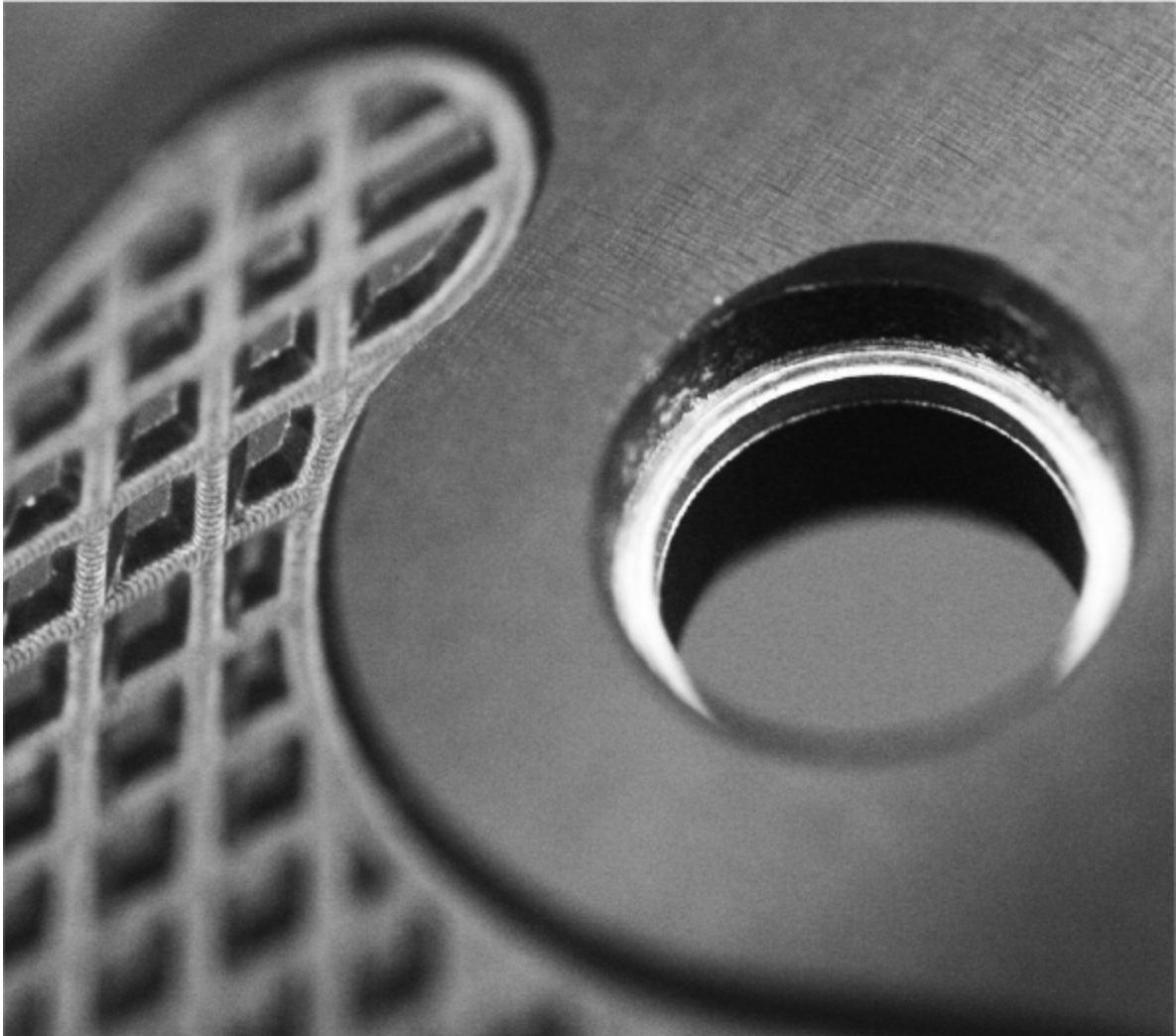
Carbon Creations makes grips from carbon fiber. You can get them regular or thin, checkered or not (and checkered with different patterns) you can get them in black, blue, red or yellow, and you can count on one thing: they’ll be tough, if not impossible to break.

Integral Friction

Unlike grips that use checkering to provide a non-slip grip, the IF grips have the frictional material in them. The first set I saw was a pair Jerry Barnhart had made. (Or made for him, I’m not really sure.) The effect was that of skateboard tape on a set of grips, but unlike skateboard tape if you wore his down you’d just find more grit. Now these were (and probably aren’t) for the soft-handed office worker who just wants to plink now and then. But for those who want to keep their grips from slipping, and are willing to put a bit of work into it, look no further.



Jerry Barnhart makes grips with a non-slip compound fabricated as part of the grip itself. It doesn't wear off or rub away.



The Alumagrips have brass inserts so your grip screws won't work loose. Now that's attention to detail.

Marvel Conversion

The use of sub-caliber training guns is an old one. A century ago, part of the development of the new service rifle (the Springfield '03) also involved the development of sub-caliber trainers. They experimented with .30-03 looking cases that could be loaded with .30 caliber handgun bullets, .22LR bullets, even .22LR rifles. All because then, as now, training cost money. And those who do not train are obsessed with saving money, even if it means a lessened quality of training. Sub-caliber training should be viewed as an adjunct to, and not a replacement of, full-caliber training.

However, smaller caliber firearms that do not reasonably duplicate the handling and function of the “real” firearm, aren’t much use. Teaching someone to shoot an AR-15/M-16 by having them shoot a bolt-action single-shot .22LR isn’t going to produce much for your efforts. If you’re trying to teach the basics of sight alignment and trigger control, they’ll learn that pretty quickly. And once learned, you’d better move on, or you’ll lose them.

Ideally, you’d want a firearm that exactly duplicates the handling and controls of the main firearm, at reduced cost and diminished recoil and muzzle blast. Enter the .22LR upper on a 1911 frame. The controls are all the same. The recoil and muzzle blast are diminished, and the cost? Well, let’s just say that the only way you can shoot more cheaply than .22LR ammo is to point your finger and go “Bang.” At the moment I have a flyer from a wholesaler on hand, and a sales flier from a big-box sporting goods store. The retail cost of a box of 525 rounds of .22LR ammunition is \$8.99. And at that, the big box store is making money, for the wholesalers price is lower than that. That’s \$18 per 1,000 rounds. A thousand primers to reload .45 ACP ammo would cost almost that much. Even reloading, using those primers, lead bullets, a small charge of fast-burning powder, and brass from the local gun club or police department (and thus no cost in this reloading

calculation) you'd be hard-pressed to reload your .45 for much less than \$70 per 1,000 rounds. At approximately \$52 per 1,000 rounds fired, you can quickly recoup the cost of a .22LR upper for your 1911. But which one?



The Marvel conversion unit in its zippered pouch.

Well, for accuracy, you should consider a Marvel. While .22LR conversions have not had a wonderful reputation. Back when “combat shooting” was new, I bought a Colt conversion unit. It was fun, but not all that reliable. And accuracy wasn’t much more than plinking level. The newer units, where you have an aluminum slide (the Colt had a steel slide, and a floating chamber to power it) are more reliable than the old Colts were, but accuracy isn’t much better. Times have changed.

When you open the Marvel zippered pouch, you’re faced with a slide assembly, magazine, and a funny looking wrench. Installation is simple: remove the old slide stop and slide, slide the Marvel on, put the slide stop through, and you’re done. Well, almost. The wrench is what you use to tighten the recoil spring guide rod. The rod is threaded, and the rear end of

it bears against the slide stop pin. You noticed, I hope, that the slide stop has an allen-head screw in it? The slide stop swings freely on the slide stop pin. When you tighten the recoil spring guide rod, you lock the barrel to the frame. Unlike other units, where the parts all rattle around on their own (the frame, slide and barrel all are free to decide their own locations, and only the slide has sights and is used for aiming) The Marvel barrel is fixed firmly to the frame. Only the movement of the slide on the frame alters accuracy when you aim. Mounting the frame in a Ransom rest means the barrel is securely fixed for accuracy testing.

If you have more than one 1911, it is worth trying the Marvel on all of them, to get the best slide-to-frame fit. It is also worth experimenting with ammunition to find what the gun likes. .22LR firearms are notorious for being picky about ammo. Now, if you're solely worried about reliability and want something to practice on steel plates and such, no problem. You can easily find what's on sale that works 100 percent (or close enough) and also shoots well enough to stay on your plates. Marvel does suggest that you not use Federal ammunition. In their experience it ends up a hassle, with failures to feed, light strikes and a generally un-fun experience. But find what it is reasonably happy with, and you'll have a great little training gun.

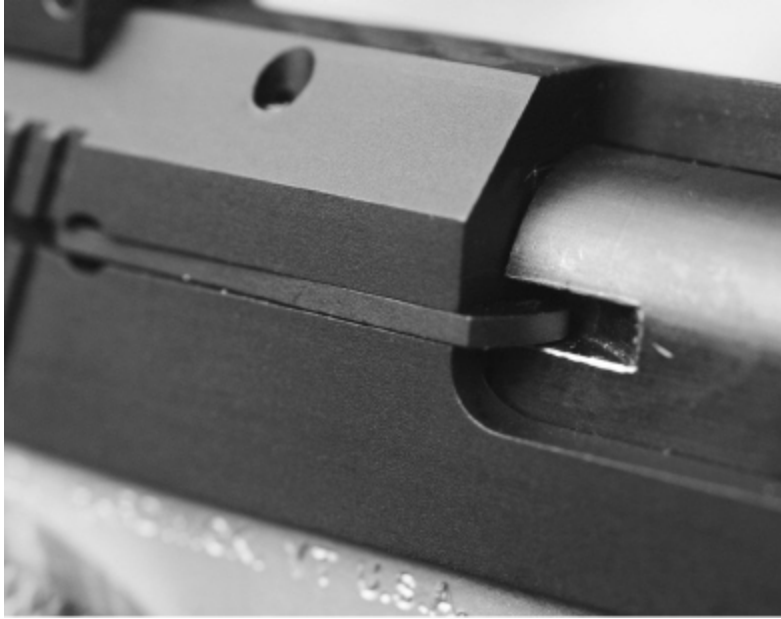


The Marvel slide is marked on the large flat with the company name. The next flat up has the serial number.



A slightly modified Colt .22 conversion magazine. A few of these, a brick of ammo, a sunny day, what more could you want?

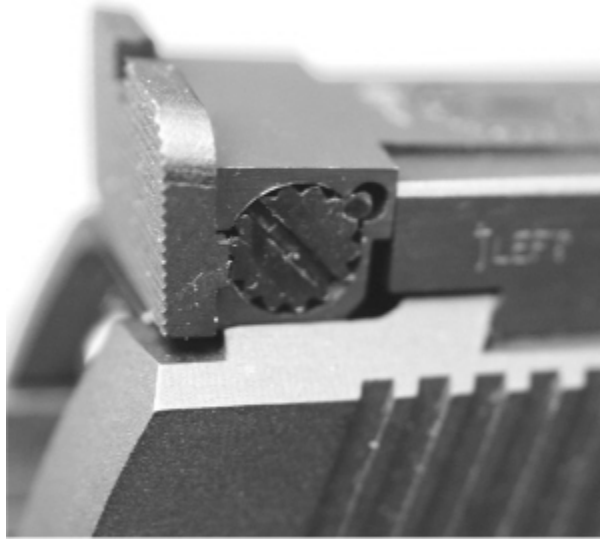
If you need absolute accuracy, then you should prepare yourself for extended Ransom rest testing. In that the Marvel is no different than any other .22LR firearm. I once spent several weeks testing various .22LR ammo in my S&W M-41, trying to find something accurate enough for The Masters. What I found was that my gun (and every other .22LR I've ever heard of) wanted what it wanted. And if I tried to skimp, it would not produce. With some ammo, even changing production lots caused accuracy changes. So, if you're going to go for most accuracy (and the Marvel is up to it) be aware that "most accurate" and "cheap & on sale!" may never coincide.



The extractor is your basic, standard, worked-for-more-than-a-century .22 extractor.



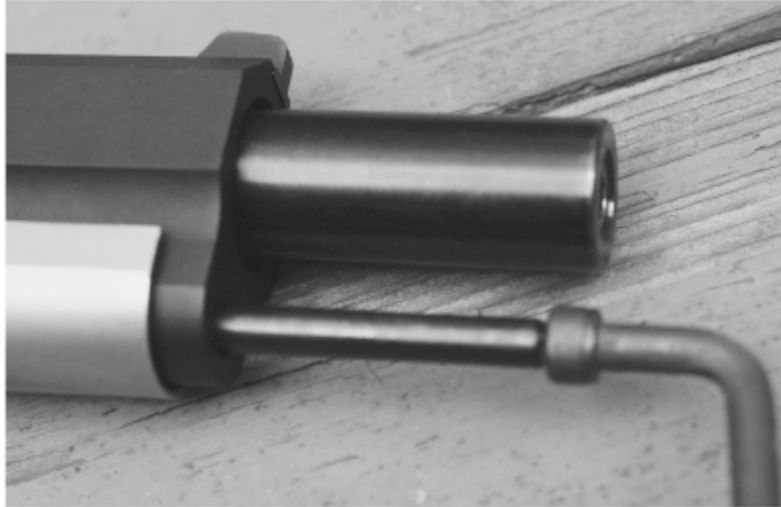
You can have a standard sight, or a fiber optic sight.



The Unit 2 uses an adjustable sight that looks very much like a Bo-Mar.



The scale pattern top flat of the tri-flat slide is a nice touch. I'd like to try this on a .45.



Use the provided wrench to tighten the recoil spring guide rod, and secure the barrel to the frame.

Marvel sent me a Unit 2, The Practical. The slide is an aluminum machining, with a steel breechface. The top of the slide is sculpted with three flats, and the top flat is given a very interesting “scale cut” that I’d like to attempt on some 1911s in .45 or .38 Super. If you look closely, you’ll see that your Marvel has a serial number on it. That’s so Marvel can keep track of production, and if there is a problem, let people know. The barrel is carved from a Shilen blank. The slide will fit any standard holster. However, if you use a competition speed holster that secures the 1911 in place via a muzzle plug, you’ll have to swap holster plugs from your regular caliber to a .22 plug. Holsters using regular retention won’t have a problem.

As it fits a holster, you can use a Marvel-converted 1911 as a low-cost trainer for USPSA/IPSC or IDPA practice. You can practice for The Steel Challenge, Bianchi, Handgunner Shootoff, any match where accuracy matters and you need to get in lots of practice to build speed. You can also use it to introduce a new shooter, without either breaking the bank on ammo, nor scaring them off from recoil. Lest you think the Marvel is simply a low-cost and inaccurate plinking toy, a number of serious competitors use Marvel conversion at The Steel Challenge. Now, the plates there are not nearly as small as the “X” ring of the targets at The Bianchi

Cup, but you do have to hit them. Even the ones at 40 yards. Serious competitors obviously think well enough of the Marvel to use it.



The Marvel Unit 2 on my Caspian Race-Ready frame.

I bolted the Marvel onto my Caspian Race Ready frame, and proceeded to blaze through a brick of ammo in no time. One marvelous thing about the Marvel, when practicing on steel, is that the steel doesn't fall. You can quickly try and fine-tune whatever detail you might be working on, while hammering a falling plate rack that doesn't fall. Or pepper poppers that remain standing. One thing to be aware of: the magazines that Marvel uses are modified Colt magazines. They have had the slide hold-open shelf trimmed off of the follower. The Marvel does not lock open when it is empty. If you use another magazine (say, an unmodified Colt) that will lock it open, you could damage the lock-back notch in the slide.

What of the cost, you ask? At \$280 for the unit, and \$40 per extra magazine, you could easily rack up \$400 in conversion costs. However, at \$52 per thousand rounds fired in savings, you can recoup your Marvel investment in as little as 8,000 rounds. Considering that it is child's play to shoot up a brick of ammo (500 rounds) in one session, you'd be a real slacker if you didn't quickly get your money back. And a whole boatload of practice while doing so.

Me, I'm going to see about getting an oversized frame just for Unit 2. With the frame rails machined to a precise fit to the Marvel slide, I'll get the best of all worlds: an accurate cheap-to-feed .22, that handles and feels just like a 1911, and fits all my holsters.

Chapter 17

Magazines



The good magazines worked well in the M9. The bad magazines were very bad indeed.

As I have said before, an autoloading pistol without a magazine is a clumsy single-shot pistol and not a very good club. You have to have good magazines, or even the best 1911 will be a cranky, ill-tempered and malfunctioning pistol. It never ceased to amaze me in the old days, watching guys with expensive custom guns (and back then custom was expensive, with no options about getting a factory model with some improvement) and feeding them crappy ammo in cheap magazines. And the “good old days” are not so far gone, if we can believe word back from Iraq. The cheap, crappy magazines the Army bought for their M9 pistols failed, and the M9 pistol took a big hit as a result. (Maybe even enough to bring back the 1911, but we can hope, can’t we?)

Sometimes I wonder if things have changed that much. More often than not, when I encounter a new shooter at the range who is having problems, magazines are the cause. The solutions are simple:

Buy Good Magazines

As in name brand, top quality magazines that will last. Yes, you can get magazines cheaper than (to pick just one) Chip McCormick PowerMags. You'll save a couple to five dollars each, buying the cheap ones. Let's say you went overboard and bought 10 of the cheapies. You saved, potentially, fifty bucks. Now, let's say you shoot in the clubs monthly USPSA/IPSC or IDPA matches, at an entry fee of twenty dollars each. If you only have two malfunctions in a year's time (and you'll have more, eventually) you've just eaten up all your savings in lost match entry fees alone. Add in the wasted ammo, gas, time and effort, and your "savings" have evaporated quickly. Again: Buy the good stuff.



All magazines in the old days had welded-on base plates. It makes cleaning a bit more difficult.



In the old days, 1911 and Luger magazines were both viewed as unreliable. (1911s were a bit better) today, you have many, many choices in 1911 magazines. The Luger? We bombed the various plants into rubble back in 1945.



CMC PowerMags are among the best you can get.

Clean Them

Rusty mags don't work so well. Yes, the tubes on many are stainless, but the springs aren't. You can't make stainless springs, make them truly stainless, and still have them work as springs. At the very least, use a mag brush to brush the grunge out of them. And once a year detail strip them (one at a time!) and scrub the spring with 0000 steel wool and light oil. Check the follower to make sure it is in good shape, and reassemble.

Buy Extra Springs

Springs do not fail from remaining compressed. Well, most don't. If you clip a spring to make it short enough to increase capacity, all bets are off. As an example, you can take a magazine for an STI, 126mm tube on .40, and it will hold 16 rounds. With proper tuning, follower shape and spring adjustment, you can get a reliable 17-shot magazine. It will even last a couple of seasons of regular practice and competition. If you further "tune" it to hold 18 rounds, it will quit after a few uses. Just about the time you've determined that it is reliable, it stops working. Ditto higher capacities, when trying to get that last round into them. If you leave the spring as-is, it is good for many years of use. I have a set of 10-shot single-stack .38 Super CMC magazines. I used them for 10 years in almost daily practice and competition. In the winter I used them in my PPC pistol and the indoor IPSC leagues. In the rest of the year they were used in my single-stack Open gun (this was quite a few years ago) my Steel gun, my 9-pin gun and so on. After 10 years they began failing to lock some guns open when empty. New springs took care of that. Buy your springs now, before you need them. Label them and put them in a safe place. That way, when you need them you have them.



Lay in a supply of spare springs, and replace the old ones at the first sign of failure to lock open.

How long do magazines last, loaded? I don't know that anyone knows the answer. However, one experience of mine is illustrative. A widow came into the shop to sell her late husband's gear. They had both been NCOs in the Marine Corps, and he had died some 17 years previously. She had finally gotten tired of tripping over his stuff, and had us buy it. The boxes, cartons, ammo cans and duffle bags filled two Ford F-150 trucks. Three ammo cans had loaded magazines in them. One was full of 1911 magazines, the other Browning Hi-Power, the third 15-round M1 Carbine magazines. All loaded, and had been that way for at least 17 years. Who knows how many more? We took them out to the range and fired them, and they all worked. So, unless your magazines have been extensively modified to hold more (and too many) rounds, I wouldn't worry until it got well past the 17-year mark.

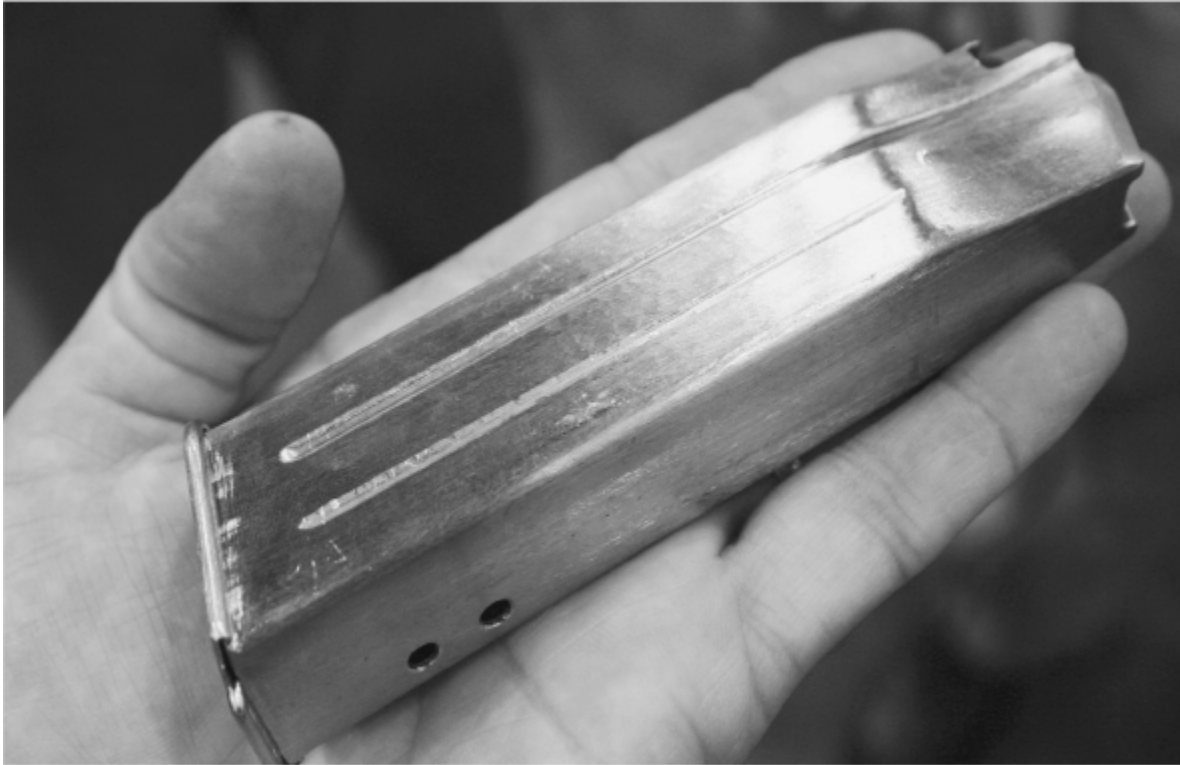


You can make a good magazine go bad if you try to “improve” it to hold more rounds. Some will, some won’t. Don’t give up reliability for one more round.

Don’t Try To Make Them More Than They Are

Your magazine holds X number of rounds? Great! Is it reliable, does it lock open when empty, does it drop free? Superb! You want more? Don’t be greedy. A government-size magazine will hold seven or eight rounds of .45. It will hold eight 40/10mm rounds, nine 9mms, and 10 .38 Supers. (More on why in a bit.) If you want more you should get a bigger magazine. A single-stack 10-shot is a perfect balance of size and capacity for the .45. If you want more you have to go to a fat magazine. Even those have limits. Trying to (as mentioned before) get the 17-shot tuned magazine up to 18 rounds is asking for trouble. Now, there are ways around that. But they aren’t pretty or cheap. Phil Strader at the SHOT Show one year showed me a magazine he obtained for his STI pistol. He was going to shoot the World Shoot, and he had a hand-made magazine that held 19 rounds. Yes, it was reliable. Yes, it dropped free. When I inquired later with another source, I found that such magazines were made by a craftsman who really didn’t want to make any more, that the “bargain” price was soon to disappear and

that if I was lucky I could still find one for “only” \$200. Excuse me? Two hundred dollars for a magazine that holds one more round? Have we all gone crazy? No.



A custom, hand-made magazine for competition, that holds one more round than others do. That extra round may be worth the expense, but only if the magazine is reliable.

As for the disparity between 9mm and .38 Super in single-stack magazines, it has to do with the rim. The rim diameters of the Super and the 9X19 are similar, right around .405” nominal. However, the Parabellum has a tapered case, and the case right above the rim is the same diameter as the rim. The Super is a straight case, with a protruding rim. Above the rim, the Super is .380”. If you add up the eight gaps between nine cases, the difference adds up. A slight .020” on each case means .040” difference, eight times is .320”. As a round is .380”, that just about gets you one more. Where does the rim go? Each Super rim nestles into the extractor groove of the case next to it, something the Parabellum can’t do.

Magazine peculiarities

One thing you don't have to worry about with the various 1911 magazines is a peculiar effect in hi-cap 9s of other types: the pipe-cutter effect. In many brands of hi-cap 9mm magazines, the indent that funnels the rounds up to the central, single feed point is an angled divot or crease on the side of the tube. That crease rests against a case as the case feeds up. It also can create problems. In the course of daily carry, the routine vibrations of movement, vehicles, running, jumping, being bashed by doorframes, causes the rounds to jostle in the magazine. The rounds, with no place to go, slowly rotate inside the magazine. The rounds bearing directly against the crease rotate directly against the sharp indent of the crease. I have seen cartridges cut in half after being in the magazine for several years. Now, we all know to rotate ammunition into and out of magazines on a regular basis to inspect them. But some don't do it. It is comforting to know that 1911 magazines have dual indentations so they won't cut the case like a pipe cutter.



The shallow and rounded spines of 1911 hi-cap magazines do not produce the pipe-cutter effect of some hi-cap 9mm magazines.

Also, if you plan to leave magazines in magazine pouches for long periods of time, try to avoid the ones with snaps. Use Velcro or Fastex buckles. Snaps can dent the magazine tube over time. (Again, we're talking years here.)

Rear slot

What does the rear slot shape matter? What does it do, for that matter? The slot is there so the central rib of the bottom of the spine, the pickup rib, can strip the top round off of the magazines. Without the slot the slide has no access. The slot can be any shape, as long as it allows the slide access and doesn't let the feed lips flex enough to mis-locate the top round. You could make it an inch deep if you wanted to. What happens in many older magazines is the slots act as a stress riser. Older magazines (and some few new ones) have the corners of the slot stamped at angles. On the oldest ones the angle was a right angle, 90 degrees. Later the sidewalls were tipped slightly, reducing the angle to less than 90 degrees. But still a stress riser. Any sharp edge, corner or angle acts to concentrate the internal stresses of any part, metal or plastic. If you take thin sheet metal, punch an angle hole, and then subject the part to impact, vibration or corrosion, the stress can increase until the part fractures.

The very job of a magazine ensures all of those. Every time it gets dropped or slammed in on a reload it receives an impact. Each firing sequence causes vibration (the magazine moving back and forth, up and down) and impacts as each round jerks up to the feed slips and stops. Sharp corners break in time. The only solution is to make the sharp corner a radius. The stress is still there, but it does not have the focusing point of the corner, and thus is much less likely to break.

Given a choice between two equal quality magazines, I'll take the rounded or radiused slot over the sharp-angled one.

Tube vs. weld

There are two ways to make magazine tubes. One is stamped, folded and welded. The other is extruded. A folded magazine is just that. A sheet metal stamping machine stamps the outline of a magazine (called "fine

blanking”) out of a continuous strip of steel. The blanks are then folded, welded, and have the feed lips stamped on a mandrel. (Some processes form the feed lips before the folding. It all depends on the particular equipment being used.) Welded magazines can be very good magazines. The drawbacks to a folded and welded magazine are the folds and the welds. If the folding and gauging process isn’t precise, you can have out of shape magazines that don’t work. There is also a temptation to use thinner sheet metal, for lower product costs, faster throughput and less welding needed. The temptation to skimp on welds is real. Welding costs money. Not just in doing it, but in buying the machine to do it. You can recognize a welded magazine by the weld spine on the rear of the tube.

Another potential weakness of “fold and weld” is the alloy used. When you bend metal you work-harden it. Properly done, the work-hardening will stiffen and strengthen the finished product. However, you have to carefully calculate (and then measure to be sure your calculations were correct) just how much work-hardening is done to which alloy and thickness, for what strength. If you don’t bother, or calculate incorrectly, you end up with soft magazines that won’t hold their shape or brittle magazines prone to cracking after a little hard use.

Extruded magazines are different. Instead of sheets of steel, they start as tubes. Each tube is chopped or cut into short segments that are heated. The hot steel is then forced through a die, forming it into the shape of the magazine tube. While still hot the tube (if a hi-cap magazine) has the stiffening ribs impressed, which also determine caliber. Smaller calibers require smaller interior dimensions, for proper stacking. Additionally, the feed lips are formed. When cooled, it is cleaned up, polished, gauged and sent for assembly or sale. Extruded magazines are a much more hi-tech process than stamping. And extrusion creates potentially a better magazine. With no welds to crack, it is unlikely to come apart. The heating and drawing process works the grain of the steel, and the cooling also allows for a certain amount of tempering of the alloy. Extruded magazines are very dependent on the correct alloy, but the makers, having invested a great deal of money in the machines, are unlikely to skimp on alloy. The materials costs are practically nothing, and the difference between alloys is nothing, to the cost of the finished product. Until the Chinese got heavy into the steel

market, you could buy plain old mild steel for (roughly) \$500 a ton. At two ounces of steel for a single-stack, and four ounces for a hi-cap magazine, you get sixteen thousand single-stacks and eight thousand hi-caps to the ton of steel. Which means your materials cost, at the old price, for mild steel, is just over three cents for a single-stack, and only seven for a hi-cap. A proper alloy for making magazines, even if double that per-ton cost, only brings the steel cost to seven and fifteen cents each. For less than the deposit on a soft drink bottle per magazine, a manufacturer is going to skimp on the proper alloy? Not if he has any sense at all, he isn't.

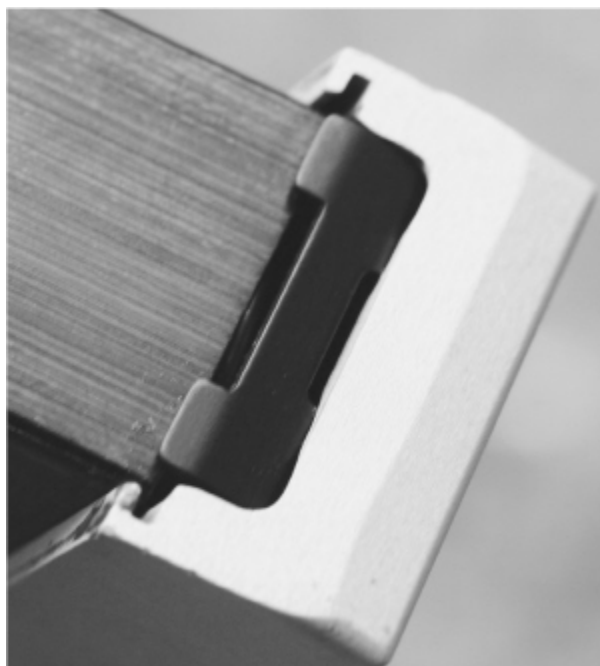


A competition shooter may end up dropping magazine in the dust, dirt, water or mud. Clean them and they'll work for you. Removable base pads make cleaning easier.

Base pads

Some think they are for dropping. What they're there for is reloading. A magazine slightly longer than the frame is easier to get home and set to

lock, than one that is flush. Original magazines had no holes for base plate screws. We had to drill our own. I used up many small drills and 4-40 taps getting magazines base plates installed. Now you can get magazines pre-drilled. Some even drilled and tapped. Do not believe the “self-tapping” screws base pads come with. Use a 4-40 tap to cut the threads, and then install the screws. Some base pads will increase capacity, but only for some magazines. What you need, to increase capacity, is a magazine tube where the base plate flanges are folded out, not in. Once you have a magazine tube with outward flanges, you need extended base pads. You can find them from a number of sources. Dave Dawson makes a bunch, as do Ralph Arredondo, Beven Grams and the good folks at CPMI. However, you will have to do your homework to make sure your magazines (mostly hi-cap double-stack, as not many single-stacks have outward flanges) are suitable for extended capacity. And, that the competition you’re in allows them.



Outward flanges allow for extended base pads that increase capacity.



The new Kimber KimPro mags come with extra base plates, pads and screws.



Kimber KimPro mags are tough, stainless, and appear to be built to last. Time will tell, but I do not expect to be disappointed.

New magazines

One new brand comes from Kimber. The Kim-Pro TacMag has a lot of “McCormick” look to it. The tube and markings are very similar. The tube is a folded and welded design. The follower is what appears to be a Shooting Star (Chip’s original company and patent) eight-shot follower with the addition of a front leg on it, coated in black Teflon. The base plate is removable. The magazine comes with a spare base plate, four screws and two different buffer pads. You can install the pads on each base plate, and swap the buffer pads depending on which match you shoot, or your need. For the main magazine in a carry gun you don’t install the buffer pad and leave it flush. Then for the reloads, you either put the low-profile on for CCW, or the larger ones for competition. Of course since it was new, I had to take it to the range and take the “newness” off of it. I did a variation of the mud and dust tests. I loaded the magazine and dropped it into the “bucket ‘o dirt” for maraca testing. It worked. I didn’t try the full gamut of mud, dust, talcum powder and water testing that I did with the guns, but I tested it enough to find out if the two-leg follower would wedge in place if I added enough sandy Michigan soil to the mix. It didn’t.



Cobra mags from Virgil Tripp are the latest, and for some guns, the absolute best mags going.

Cobra Mags

Virgil Tripp is one of the original participants in the hi-capacity 1911 frame development. Since then he's worked on other projects, and the Cobra mag is one of them. Rather than simply build the best 1911 magazine by book specs, he started from scratch and figured out the way to get a magazine that would provide for the smoothest path of a cartridge. (That's right, actually improve on the original Browning design, not just build to the correct specs.) The Cobra mag is the end result. What makes it different? For one, the Cobra mag holds the top cartridge higher and at a better angle than a standard 1911 magazine. The tube of the Cobra mag is longer, so the spring has more room for the eight rounds it feeds. However, the end result of the tube plus buffer pad on the Cobra mag is the same length as that of other eight-shot magazines. Assembled, they're the same. Now, there may be some place where the longer tube is problem under the rules of competition, but it shouldn't be. Same assembled length, same

capacity, what's the problem? The advantage is the spring is worked less, and the follower can be improved. The spring is chrome silicon, and has more coils than other eight-shot brands. The follower is full size, with legs front and back, and made of plastic. However, the impact ledge that pushes on the slide stop is steel reinforced. No need to replace followers because the ledge got chewed up after use. The base pad is not held on by means of turned-in or turned-out lips. The base pad slides into slots on the tube. Turned-in lips make dis-assembly of the magazine a hassle. Turned-out lips make for a larger base plate. The slots of the Cobra make it different.

Why all this fussing? Remember our discussions of feeding dynamics? When the top round starts to feed, the force of the slide striking the round at 12 o'clock acts to pivot the nose down-wards. In a mist-timed or fitted gun, the round can "stub" or stall on the feed ramp and not feed. The Cobra mag starts the round higher, so in the course of feeding the downward pivot starts from a higher point, can't progress as far before striking the feed ramp, and feeding improves. I wish I had a mis-feeding 1911 on hand with which to test it. However, all mine feed just fine, thank you. And the test guns sent me were a uniformly reliable lot. However, I have Ned to the rescue. He had a "pistol from hell" one that would not feed reliably. Nothing he did (and Ned can do a lot) could make this gun feed 100 percent. Except use Cobra mags. That gun refused to get with the program unless fed Cobra mags. I have always felt that you should be doing what the gun tells you it wants. If it shoots accurately with a particular load, feed it that. If yours wants Cobra, don't argue.

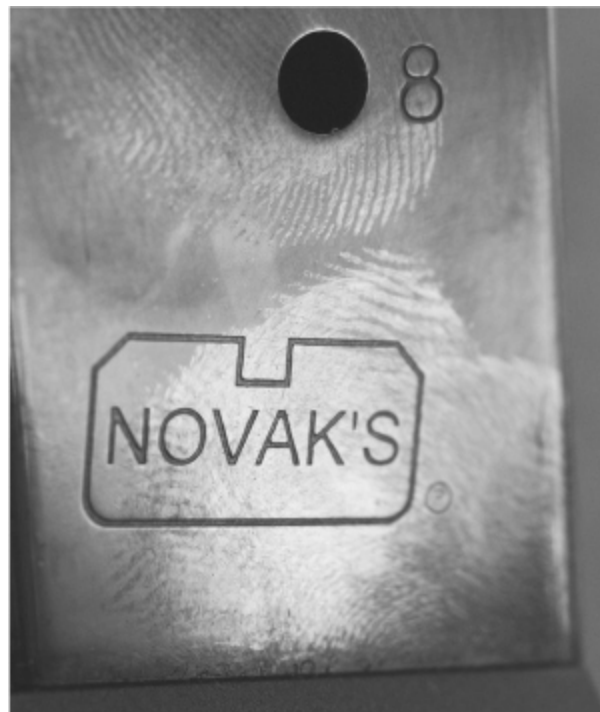


You can't have too many reliable, clean ready-to-go magazines.

How many do you need?

That depends on what you're doing and how good your re-supply is. For a competition shooter, I'd say you want not less than four hi-caps and five or six single-stack magazines. More is better. Yes, magazines are rugged, and can survive being stepped on or dropped in the dirt. But do you really want to have your match results depend on your sand-filled magazine you dropped on the previous stage? If you can't afford enough magazines to get through a match without using the dropped ones, get a magazine brush. Empty your dropped magazines between stages, brush them out, and then load them up again. In police work you re-use magazines in training. Outside of training you don't pick up dropped magazines unless you need the ammo that remains in them. At the end of that particular event the evidence technicians will pick up your magazines. In a military setting, you

want to get your empty magazines into your dump pouch, where you can load them up later. If you don't, they are probably lost for good. In talking with vets of the Iraq conflict, I found out that among the local weapons production was a plant or plants making a Browning Hi Power clone. Quality ranges from "pretty good" to "piece of dog dirt." One peculiarity is that there seemed to be no excess production of magazines. Each pistol left the factory with a magazine in it, and that was it. So, the arms rooms of police stations and of civilian contractors have boxes full of Hi Power clones, sans magazines. If you're issuing Hi Powers to your contractors, or the local police, you issue it and the magazines you've stripped out of other guns on hand. So if you issue a pistol and two magazines to each man, a box of 100 pistols leaves you with 50 issued and 50 on hand lacking magazines. It seems to me if someone could get a few shipping containers in-country with quality BHP magazines, they could make a small fortune. Until then, those extra Hi Powers are simply oddly-shaped doorstops.



Wayne Novak now makes magazines. That's a measure of how important reliable magazines are to some gunsmiths.

And the predicament points out the need for a ready supply of reliable magazines. I'll take a small liberty here and change the old quote: "You can never be too rich, too thin, nor have too many good magazines."



It would be a lucky contractor who ran across a Novak custom Hi Power in Iraq. However, even a Novak needs magazines to be more than a single-shot pistol.

Chapter 18

Sights

Sights are essential to accurate shooting. Curiously, there is some disagreement on that opinion. Some instructors advocate some version or another of unsighting fire. Some call it “instinctive” others “reactive” or “natural.” But they all aim. They just don’t use the sights as the rest of us do. Why the disagreement? Centuries of customary use. I had an epiphany while watching an adventure movie. Now, you can learn a lot of really bad habits in shooting, watching movies. The people who make movies usually know as much about gun wrangling as they do about computer hacking, car chases and marital fidelity. Which is to say, not much. But the movie I was watching (it really doesn’t matter which it was) had a fight scene where it struck me: If the bad guy is trying to cut you with a sword, you really only have to be out of sword’s reach to shoot him safely. Which translates to “close enough to point and hit.”



Mike Voigt, shooting a target array at five yards at the highest possible speed. Notice he reloads and takes the fraction of a second needed to get the sights in line, before shooting.

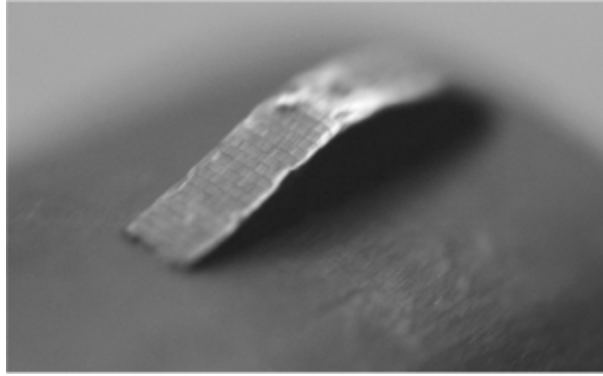




If you can use this rear sight, you have better eyes than mine. And I'm corrected to 20/15.



The Luger sights, the same front blade from 1900 to 1945, and beyond.



The improved front sight on the 1911A1, still barely more than a speed bump.

Firearms and bladed weapons had a lot of overlap in time. From their introduction in the 14th century to the beginning of the 20th, you were prudent to have a backup weapon that was edged and not a firearm. In the American Civil War Cavalrymen and Artillery crews still carried swords. In a melee, your six-shot revolver could run dry, but a sword still worked as long as you could swing it. British Officers dealing with recalcitrant natives in the end of the 19th century found handguns useful, but still carried swords.

Even when handguns back then had sights, the sights were small, hard to see and harder to use under stress. Many never changed. The sights on Lugers made in 1945 were just as small and impossible to use as those made in 1900. Our U.S. Army improved the 1911 sights in 1927, with the 1911A1, and even those sights are tiny compared to what is normal today.

Fast-forward to the 21st century. If you think you're going to be dealing with a scimitar-wielding bad guy, using your handgun, you've spent entirely too much time playing video games. Not gonna happen. If you have to use your 1911, it will be against firearms-toting opponents. You need to get hits beyond arms-length. You need sights.

When IPSC first got started, the choices for sights were grim. One viable option was to get bull's-eye-type fixed sights, big and square, and trim them to a size you could carry. Another was to have S&W adjustable sights installed on your 1911. I just ran into such a pistol, in the hands of Loren Helwink, a police officer in Illinois and a friend of mine. He'd had it

built back then, and came across it in his safe. (Yes, many of us have enough guns we can lose track of them. It is indeed a terrible burden.) He had cleaned it up and was carrying it during a class for nostalgia and to re-acquaint himself with the 1911. He let me handle and take photos of it. As an example of the state-of-the-art back then, it is perfect. Well, it isn't perfect, which is what the state-of-the-art was then. If you handle a similar 1911, the first thing you'll notice is that the rear sight dovetail is still there. The usual method of dealing with it was to remove the old sight, fit a wedge to fill the dovetail, and file it flush to the slide. Once re-blued, it hardly showed. Today, most gunsmiths would be embarrassed to be so casual, but that was "the way" back then.



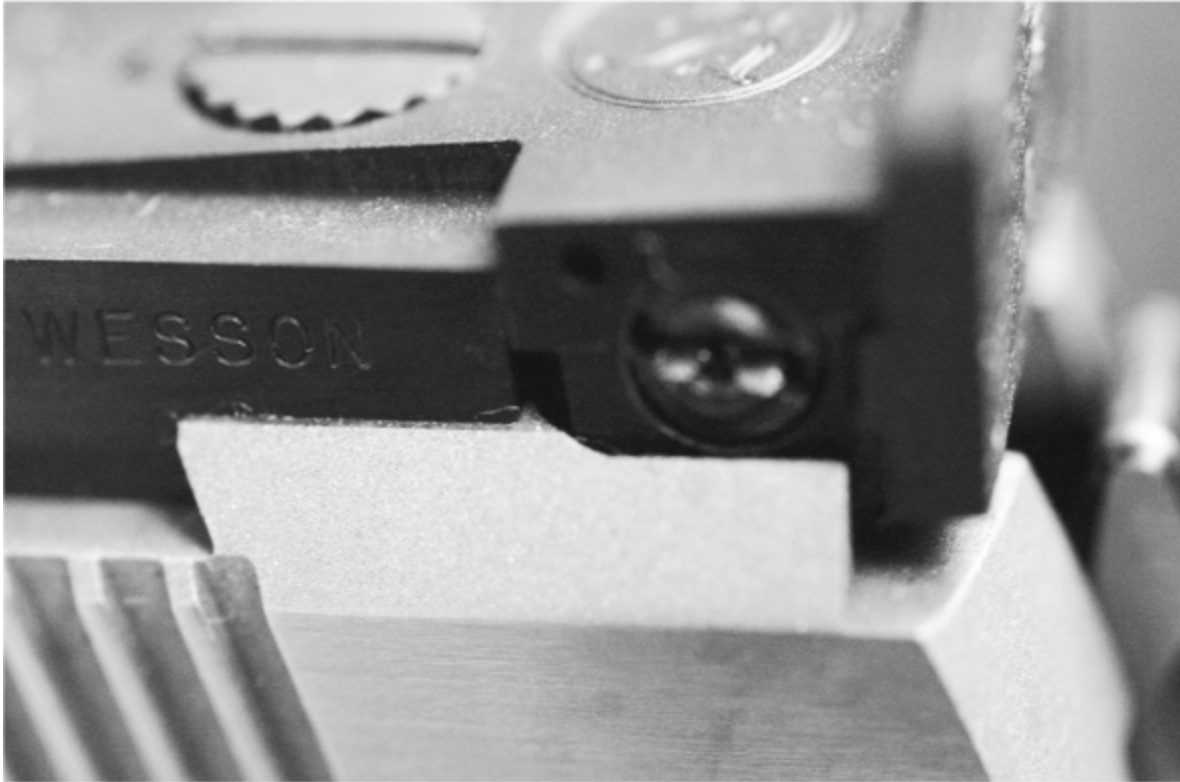
A typical S&W sight installation on a 1911. Notice you can still see the dovetail filler.



The front sight, a cut-down bull's-eye “billboard.”



Properly installed, the S&W sight is click-adjustable.



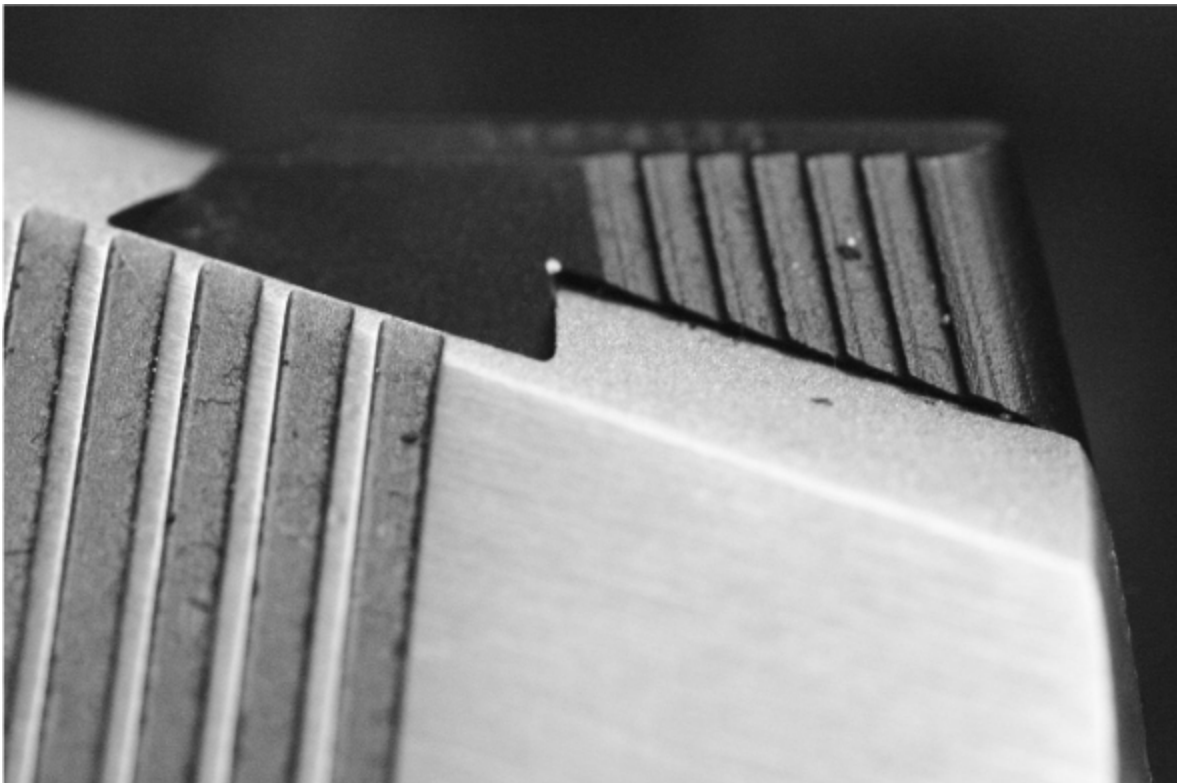
A low-mount B-mar sight, “melted” into the slide.



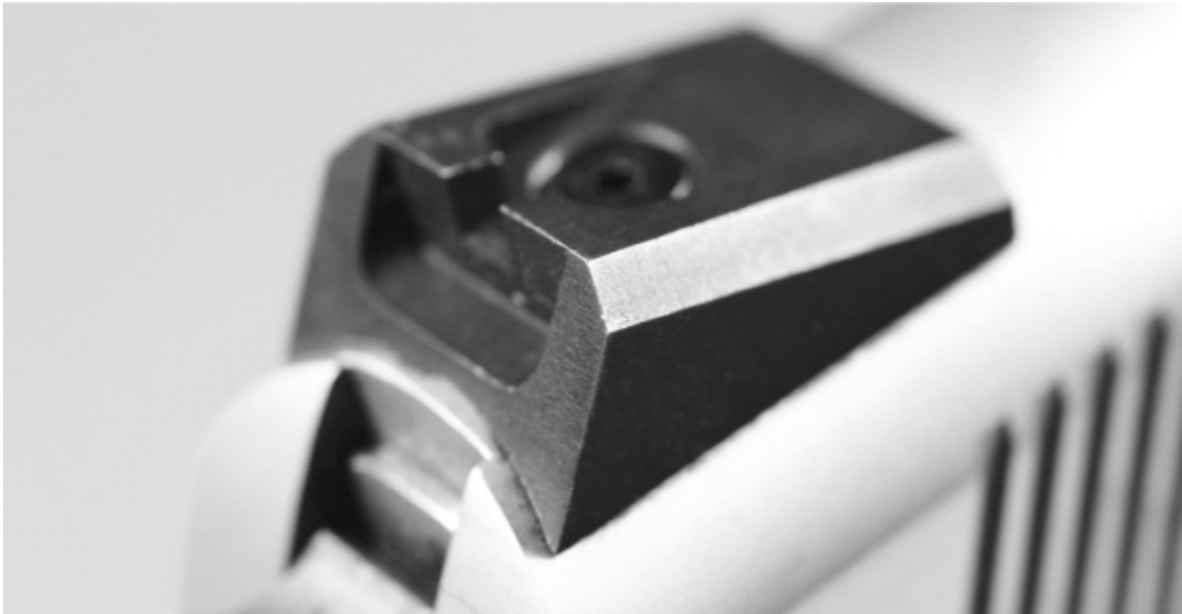
Some gunsmiths insist on hanging the Bo-mar off the rear of the slide. I don't think it looks right.

The front sight is an oversized bull's-eye blade, staked in place and then carved down until the sights were zeroed with the S&W rear.

Soon after, the melted Bo-mar came in vogue. Instead of installing it in the regular dovetail, opened up, gunsmiths would machine a new dovetail and lower the sight until it was low enough into the slide that you could use a front sight only .200" high, instead of the nearly half-inch blades bull's-eye shooters used. For a long time the Bo-Mar was the custom sight to have. However, the Bo-mar is not all that durable. Oh, it is plenty tough enough for lots and lots of competition shooting. But for the rough-and-tumble of SWAT work, and jumping out of perfectly good government aircraft, it isn't so good. One hard whack on a doorframe, and your sight is busted. (Been there, done that.) Wayne Novak, when he consulted with S&W on their pistols, designed a new sight. Basically a pyramid, it is so tough the only thing you can do to harm it is either hit it hard enough to collapse the rear slot, to drive it out of its dovetail. Since then, it has become the new standard.



The Novak, here with patented side ribs, is the new standard for combat sights.



The McCormick Low Rider sight. No machining for a really good sight.

A sight similar in shape but different in mounting is the McCormick Low Rider. Instead of needing to machine a new dovetail, the lowrider uses a bracket that slides into the old dovetail. Then the sight body screws to the bracket, clamping it down. Just like that you have a sight, without machining. Once you have it zeroed, flood it with Loc-tite and leave it alone.



Optics are more-and-more accepted as “real” sights, although the Open gun is still seen as a competition toy.



In the old days optics were unreliable. Now it is a rare shooter who can't get his or her optics to last the season, instead of just the match.



Night sights are radioactive capsules that glow in the dark. One up front, two in the rear.

Competition has brought about many changes. One change in iron sights is the fiber optic sight. There, the sight is relieved to take a fiber optic segment. Light enters the tube from the sides, but due to reflectance angles cannot escape from the sides. It can only exit the front or rear of the tube. With a bit of dye in the mixture, the tube then appears to glow in the dye color. Red, green, yellow, the choice is yours. Many shooters like the fiber optic sights, as it gives a result very similar to optics, a glowing dot that indicates where the bullet goes.

Which leads us to optics. The big slam against optics in the old days was that they weren't "practical" or "tactical." Well, we've pretty much put that one to rest, at least as far as rifles are concerned. You can hardly look at a photo of our troopers and Marines in Iraq or Afghanistan without seeing

optics of some kind. In another generation or two of optics development, they will be compact and durable enough to be used on handguns in combat. For now they are still a competition tool.

What sight should you get on your 1911? The answer depends on your use. For a great many uses, a fixed, plain, set of iron sights is still the best. Many prefer the added option of night sights, tiny radioactive capsules that glow in the dark. For many shooters, adjustable sights are of no additional use, and only add cost or the chances of breakage. You can do a lot of good competitive work, and daily carry, a 1911 with plain black iron sights on it. Consider night sights. Optics are what you'd use only in a few competitive divisions, and make sure you have spare batteries.

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PREFACE TO THE INDIVIDUAL TESTS

You'll notice that some things are different between this book and Volume 1. One difference is that I didn't do all the testing, measuring and drawing up of charts for this book that I did in the first. Why? For all that work, I learned as much as I was going to learn, and doing it to another batch wouldn't have changed anything. For instance, in Volume 1 I measured the extractor tension of all of the test 1911s. (And all of my own, too.) What I found was interesting: the extractor tension measured anywhere from zero to forty-four ounces. (If you read Volume 1, you know this. If you haven't, go buy it.) and yet, they all worked. Well, the ones that didn't make the book, that are no longer in business, didn't work. But their failures were not related to the extractor tension they exhibited.

So we know that extractor tension, for all the fussing that gunsmiths have done over it through the years, really doesn't mean much. What I did this time was to seriously abuse a few selected extractors. I shot a bunch of Wolf ammo through the test guns. Some "experts" (and even real experts) will tell you that steel-cased ammo is bad for your gun. There was a limit to just how much ammo Wolf would send me, and how much I was willing to buy, so I can't say I've proven the idea false. But I sure am not convinced Wolf is bad for your gun.

I shot a lot of ammo in the Ransom rest. But I did not provide detailed reports on which ammo a particular gun liked. After the first volume, I had a club member come up to me and remark on a 1911 he had bought. "Pat, I bought this gun because you said it was good. It is, but it won't shoot the ammo you said it likes." Oops. Just because XYZ brand 1911 shot stellar groups for me with Black Hills, Cor-bon or any other brand, doesn't mean that your XYZ brand 1911 will, too. My mistake, I should have been clearer on what I was presenting. With the exception of the load using Oregon Trails 200-grain lead semi-wadcutter and Vihtavuori N-310, which shoots spectacularly in almost every 1911 I've ever tried it in, you can't say "XYZ guns shoot best with ABC ammo." So, for those who might have similarly been lead astray back in Volume 1, I apologize.

All those endeavors were fun, informative, and looking back, not as useful as I thought they'd be. So I didn't do them again.

I did shoot all the guns, and my testers and I went through a veritable boatload of ammo testing them. If I could figure out a way to both efficiently test the firearms I'm writing about, and do meaningful practice at the same time, I could be an IPSC Grandmaster in short order. Until then, I'm just the lucky guy who gets to shoot all these hi-zoot 1911s.

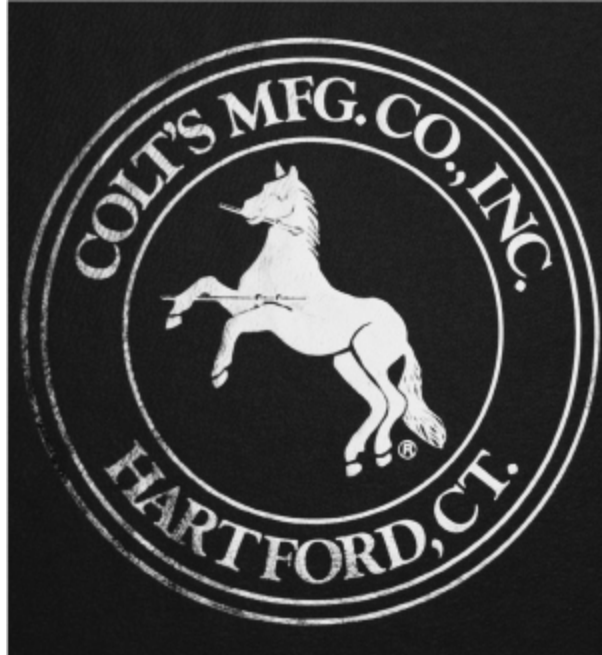
Reading through the tests, I'm sure someone is going to e-mail me, or write an online review along the lines of "Did Sweeney ever meet a 1911 he didn't love?" You bet. I've shot lots of 1911s that were cranky, inaccurate, badly built or indifferently assembled. But reviewing guns isn't like reviewing books or movies. When (insert name of big-name movie director here) makes a movie, it is done, a single item of interest. You can excoriate Bruce Willis for his singing cat burglar performance, or the mess of a movie Paul Verhoeven made of Las Vegas dancers, and know that what you wrote about is what people will see. Firearms are different. The model is the same, but firearms are like people. They have tastes in ammo, they work better or worse, they vary from year to year. Were I to write about the bad sample I got, and the manufacturer fixed it, you'd read forever of the faults of that 1911. As I've said before, if it won't work it doesn't get written about. If it won't work, but the maker fixes it, then there is no harm. If the story is interesting enough, then I'll write about the process of getting it fixed.

I will admit to be pre-disposed to liking the 1911. But my knowledge also puts me in the position of being able to be persnickety on details and performance. I know, as many suppose they do but few actually do, just what level of accuracy and reliability a 1911, or any other defensive sidearm, is supposed to deliver. So if I get a bit light-headed over this gun or that, hey, it could be worse. I could have the job of a fashion photographer, taking pictures of supermodels every day, using the latest Canon EOS digital cameras on loan. Or taste-testing chocolates..

So enjoy the fruit of my labors, and the next time you think you'd like to try being a gun writer, look up the Greek myth of Tantalus.

Colt

Yee-ha, we got a Colt. This may not seem like much to some readers, but there are manufacturers who are notorious for promises and no guns. And manufacturers who are simply notorious. When it comes to getting loaners, Colt is in a division of their own. You may think that gun makers are “big business.” That guns fall off of assembly lines like cars at an auto plant. As if. The biggest maker, Ruger (at least from what we can glean in the trade publications as to production, income and employment) is not as big as any division of General Motors. I wouldn’t be surprised to find that GM spends more on janitorial supplies and staff for building maintenance just for offices than Ruger makes in a year. Gun companies are not big business. And they do not have production lines continuously churning out guns, despite what Sarah Brady and her minions might think. Gun makers usually work on a “batch process” model.



The Colt logo and box color are meant to evoke memories of the Colt dome in Hartford, CT.



The Colt Special Combat comes with things you need, like CMC magazines, and things you “need” like a cable lock.

In the batch process model, you set up the tooling for a particular product, and then you manufacture the needed parts to assemble that product. How many do you make? It depends. How many will you sell in the next year? How much does it cost to set up the tooling? What other products do you have that sell better, or make you more money? Once you’ve made them, you pack the tooling back in storage and set up for the next product.

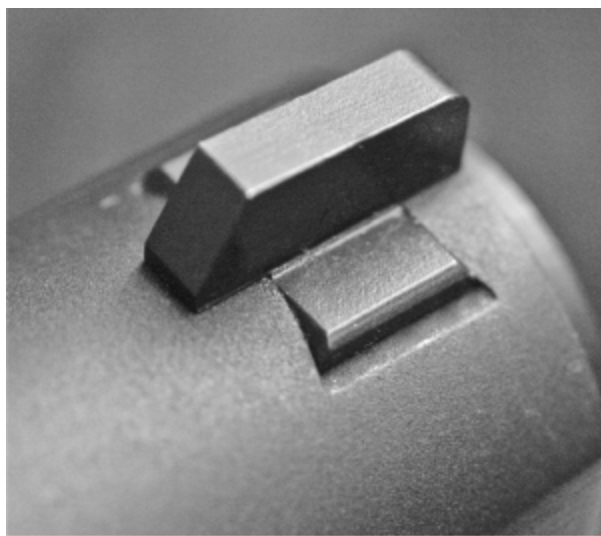
To be brutally honest about it, Colt is a small company. While they have a long and storied history, and a rich tradition (not always for the right reasons) they have a few products that the buying public wants, and offer a few variations of those products. They have a small plant, high costs, a small and ageing work force, and brutal demands on their time, money, staff and plant by the government, who when they want something, want it yesterday. And there are a lot of people with their hands out. But then you

have every police department, security agency, governmental regulatory agency with a staff of more than three with arrest powers, and many, many armies around the world. They all want to “borrow a rifle” or “obtain some T&E samples.” Some will pay. Some won’t. And some just assume that they can borrow product, and return it at no cost other than shipping. Colt may not have a lot of things people want, but what they make, a lot of people want.

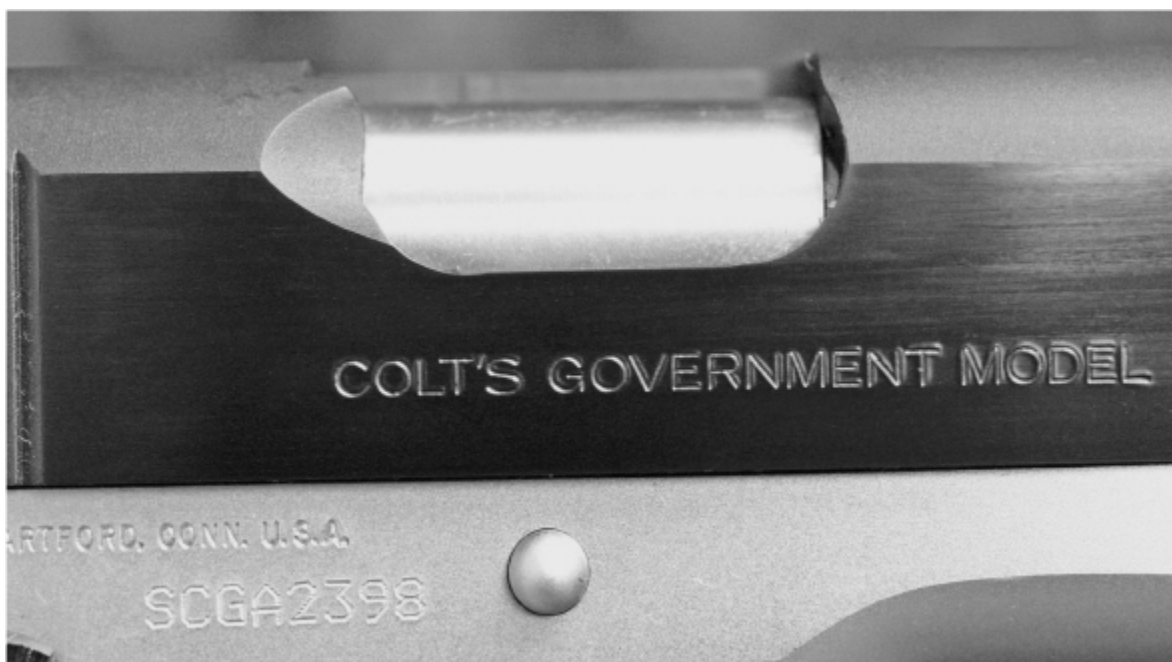
One of the things they make that people want are 1911s.

The one they sent me is a competition model, and I have to take back some of the things I’ve been saying and thinking about Colt in the last few years.

It comes in a bright blue box, with an embossed Colt logo on the cover. Inside, the foam lining holds a Colt Special Combat Government, two Chip McCormick eight-shot Power Mags, owner’s manual, the ubiquitous cable lock, and a hanging tag, orange. Curiously, there was no fired case. Based on the reviews of the first volume, someone out there is going to complain that I didn’t test every Colt model made. “What about the Defender series? The Officers models?” Get a grip, guys. Getting one gun out of Colt was a major coup. Asking for one of everything they make was a sure ticket to being told “NO.” As I didn’t want to be told No, I asked politely for one gun. And got it. Other brands I could be sure of getting two. But Colt?



The front sight is Novak, ramped, and not serrated.Hmm.



A nicely scalloped and barely lowered (.470" sidewall) ejection port.

Special Combat Government

Obviously, a Government Model sized pistol. The slide is blued, marked with the name on the left side and "Colt's Government Model" on the right. Vertical cocking serrations only at the rear. The front sight is a Novak-type front blade, with the sighting face of the sight left smooth. No serrations. The rear sight is a Bo-Mar, with a typical error I see on the part of gunsmiths, and now Colt: the rear sight overhangs the slide by a visible amount. The overhang is only .190", but it means more than you'd think. It overhangs the hammer, making thumb-cocking the hammer a bit more hassle than it should be. Yes, we all know you don't touch the hammer on a 1911, but sometimes when popping it open to inspect something, or make sure it isn't loaded, it is a bit easier to cock the hammer and then work the slide.

Why is it where it is? To avoid the Series 80 firing pin safety plunger and spring. One unfortunate result of the Series 80 design is that the plunger is not very well located for the Bo-Mar sights, when installed as a low, or "melted" install. The sight has been installed so the plunger tunnel rests between the rear blade cut and the dovetail cut. Were the sight moved

forward, the plunger tunnel risks coming out in the rear shelf machined for the blade and body of the Bo-Mar. Some gunsmiths avoid installing Bo-Mars on a Series 80, to stay away from this unsightly problem. Others move the sight as far forward as they can. One solution is to select a different sight, one that has the dovetail in a slightly different location. Tough, when the Bo-Mar sight is the accepted standard. The sight came lifted off the slide by .060", typically a sign either that the front sight is too tall, or the barrel lockup has been propped up too high. As the front sight is only .190" high, I suspected the rear of the barrel. The rear blade is also visibly left of center, as shipped.

Except for the sight, the slide is nicely done. The blue is deep, the polish well done, the top of the slide matted, and the edges have been tended-to. They aren't razor-sharp, but they haven't been melted, either. The ejection port has not been lowered much, if at all. With a sidewall of .472" it certainly needs the large inside bevel to get brass out. The small scallop on the rear of the ejection port is probably cosmetic, but it is nicely done. The front of the ejection port has been slightly relieved, to allow live-ejection.



The sight overhangs the rear of the slide, to clear the Series 80 safety spring and plunger.

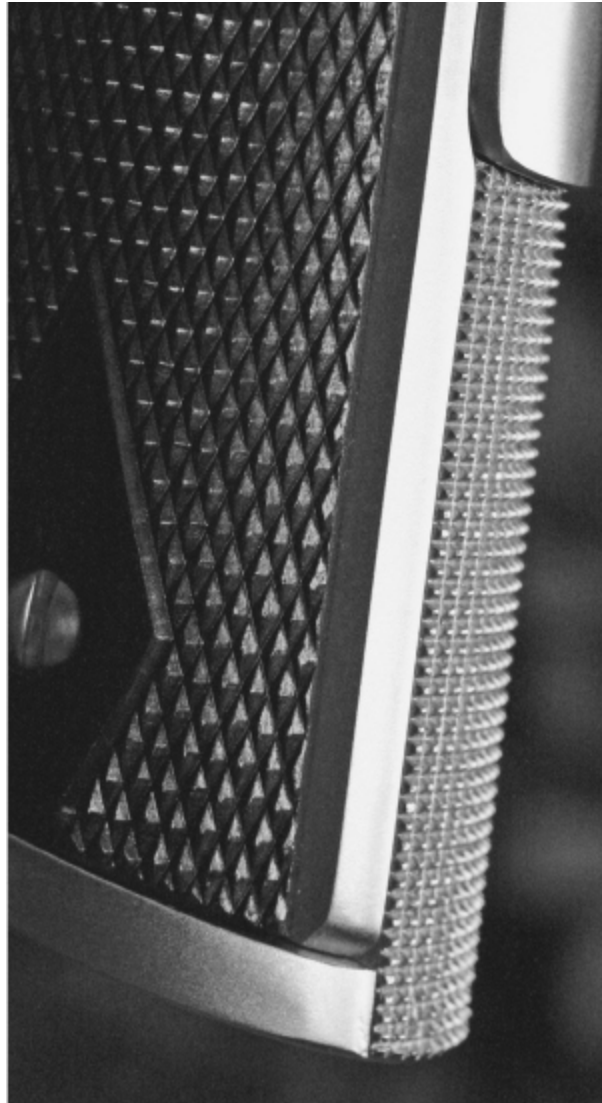


A nicely-done rollmark on the left side makes it clear which model this is.

The barrel is a Colt, standard-ramped, with a bushing at the muzzle, and a rounded crown. The sample gun is a .45 ACP, but you can have the same setup in .38 Super. The recoil spring assembly is the standard, no full-length guide rod here. The fit of the barrel to the slide and frame is good, while the fit of the slide to the frame is somewhat loose. You can easily wrestle the slide from side to side, and once I had shot it a few hundred rounds to break it in, the slide could be made to rattle on the frame simply by shaking. The barrel is properly fitted at the feed ramp, with a clear space between frame top groove and leading edge of the barrel ramp. The muzzle appears at first blush to be straight, but a quick look with a dial calipers shows that the bushing bearing section is .010" larger in diameter than the barrel shank.

The frame is a standard Government-sized frame. The first thing you notice is the color. Not stainless, but electroless nickel. I've seen enough stainless, platings and nickel jobs to pick up the slight yellow tinge electroless has. The frame was nicely polished before plating. However, if you want to have any extra work done, you'll be stripping nickel and re-plating. So decide before you get it if you'll need checkering, stippling or some other frontstrap treatment, for the frontstrap on this gun is bare. The dustcover is standard, no light rail. The curve from the trigger guard to the frontstrap is the same it has been for decades. Colt apparently does not feel

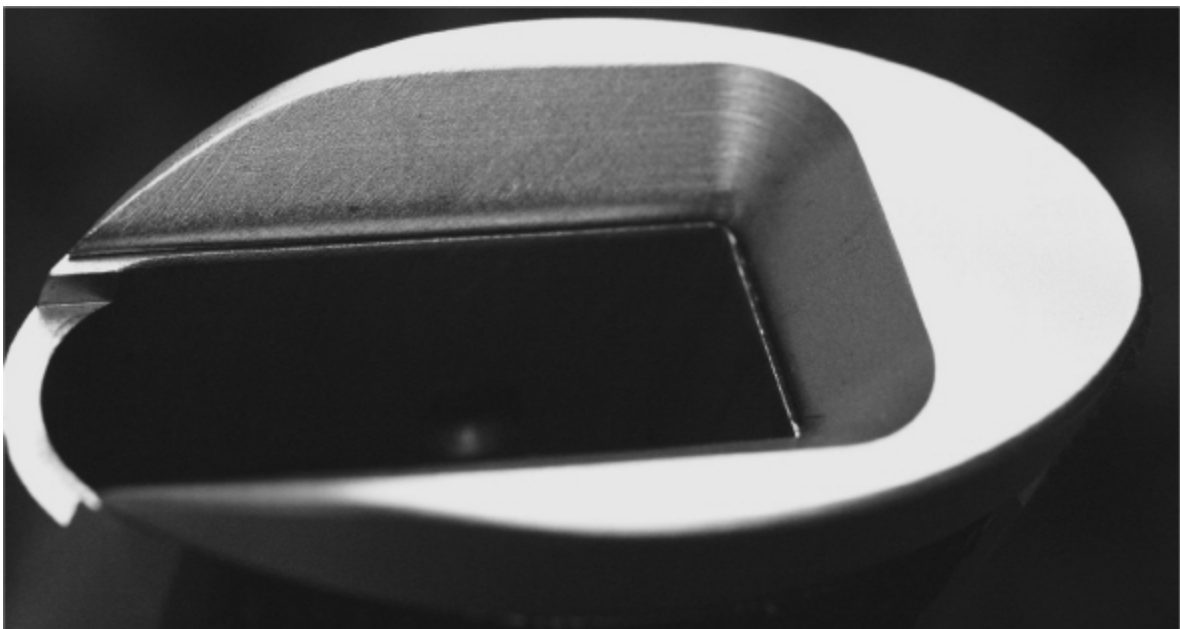
the need to tighten the curve, as so many other makers do, to let the shooter get a bit higher grip. The slide stop lever is (as our British cousins are wont to say “bog standard” and grooved only on the top surface. The thumb safety is an Ed brown ambi, in stainless. The right-hand paddle is a bit large for my hand, and interferes against my knuckle when I press the safety down. Not Colt’s fault, I have the same problem with almost every other extended ambi safety. The grip safety is an S&A, which is virtually indistinguishable from all the other grip safeties. Really, when it comes to grip safeties other than original there are only three: the Ed Brown, very high and flat, the old M-S Safari Arms with its swoopy upcurve, and all the rest. The grip safety is not badly fitted, but the parting line on the right side is slightly larger than on the left. As the three-leaf spring inside pushes on the grip safety from the right side, if you cut the radius too much you’ll get the gap difference.



The S&A mag funnel mainspring housing is flat, checkered and properly installed.



The amib safety, as many wide ones do, hits my trigger finger knuckle when I push the safety off.



The S&A mag funnel is fitted to the frame, but Colt could have done more.



The now-customary three-hole aluminum trigger, and the smooth and unlifted frontstrap.

The grip safety does not have a speed bump. Below it is the S&A mainspring housing and magazine funnel. The mainspring housing is flat and checkered. The funnel has either been blended to the frame, or the dimensions worked out perfectly. The frame has not been opened to accommodate the S&A funnel. The grips are double diamond and of a very dark wood. Curiously, the grip screws are all “clocked.” That is, they are all perfectly vertical to the grips. If this is luck, what are the odds? And if someone went to the trouble of fitting screws that were clocked, why isn’t that person fitting grip safeties? Or rear sights? The magazine catch is checkered, standard-height, and has a full power spring in it. You aren’t going to have the magazines drop out accidentally, not with the spring that’s in there. The right side of the frame has the Colt address line rollmarked, while the serial number is pin-punched. I assume that the “SCG” part of the serial number refers to the Special Combat Government, and the A and digits are the variable parts of the serial number.

In all, the Colt came much better fitted than I had seen previous Colts done. Back in the early 1990s, I spent quite some time talking to the then-

President of Colt about their appalling lack of fit-ting and attention to detail. As we were at the Colt display table at the USPSA Nationals, I had no shortage of top-quality guns to demonstrate my points. This Special Combat is much better done than those guns, and the ones that followed for a few years. As an out of the box gun it is not bad. Had you sent your base gun off to a custom gunsmith, waited six months or a year, and gotten this back you'd be justified in disappointment. And the electroless nickel does bother me, as your choices for a non-skid grip are either skateboard tape or a new plating job after the checkering goes on.

Enough carping about looks, how does it shoot? Some of you who have read me for a while might recall my first prize gun. I shot in the 1981 Targetworld Nationals, in Cincinnati Ohio. I saw the number of shooters entered in "Amateur", looked at the names in "Professional" and signed up as a Pro. (If the Olympics ever accept IPSC shooting as a sport, I may end up regretting that decision.) I ended up "in the loot" as a Pro simply due to the short list of names. My first attempt at gaming the system, and it worked. My prize? A new-in-the-box Colt Series 70 Government Model, blue, .45 ACP. Out of the box, it would not feed, fire, extract or eject a full magazine without some fault. That's right, the "mean time between failure" was less than a magazine. I promptly sent it off, with a big check, to Steve Nastoff, for reliability work and accuracy improvements. It returned to 100 percent reliability and no greater accuracy than it had when it left. (Another story, covered in Barrels.)



The Colt was 100 percent reliable, which isn't surprising, given their choice of magazines.

I suspect that the future success of Bill Wilson was paved by such guns.

And had this gun existed then, he'd still be a gunsmith who used to be a watchmaker. And not the industry of Wilson that he ended up making.

Right out of the box, this gun worked without a fault. I started by feeding it Black Hills and Armscor 230 hardball, with power factors of 185 and 193 respectively. It ate all I had to feed it, and so I went on. It consumed without fail every load I had: hollow-points of weights from 165 to 230 grains. Lead reload with 185, 200 and 230 semi-wadcutters. Lead reloads using 240-grain flat-points. Even some of my dwindling supply of 265-grain lead semi-wadcutters went downrange in the interest of scientific curiosity. All went downrange. All fed properly, and ejected as they should. Now, not all was sweetness and light. The 265's were really cranky about live-ejecting. But as I've never had to live-eject that bullet except at the end of a set of bowling pin tables, not to worry. The sights were spot-on as shipped, which is a good thing and a bad thing. Good in that someone at the factory spent the minute it took to crank the sights over to get the pistol

zeroed. And bad, that getting it zeroed means lifting the rear sight .060" and giving it a few clicks left.

The Chip McCormick magazines worked flaw-lessly (as expected) feeding everything, locking open when empty, and dropping free afterwards.

If the result of testing shows that the Colt Special Combat Government pistol is a reasonably well-fitted gun, with pretty good accuracy and 100 percent reliability, then why am I so grumpy about it? I guess I had higher expectations. I expect the company that started making 1911s, that has almost a century of experience at it, wouldn't have to wander through the wilderness. We should be holding Colt pistols up as the standard against which all others should be judged. But then, I've long been an optimist. Despite the low points in Colt's past, this gun is certainly worth considering.

.50 GI

Growing up in his native Denmark, Alex Zimmerman was a good gun person. That is, he ate, slept and breathed guns. He became a gunsmith in Denmark, a country not noted for its friendliness towards gun owners. Not as bad as some other European countries, Denmark still had its faults. One of those was a prohibition against large-bore handguns. So, when he developed his .50-caliber 1911 idea, it had to remain solely as an idea, some drawings and a few modified parts that wouldn't get him in trouble.

To do more, he had to leave Denmark. Not that he immigrated to the United States solely to build a .50. He went to work for Bill Wilson at Wilson Combat, and shot in handgun matches around the country. I met him at Second Chance, where he was a good solid pin shooter, and where we found out curiously enough, he is a distant relative of Ned Christiansen.



The .50 GI cartridge is noticeably larger than the 9mm, .40 and .45, but not so large it becomes a joke.



Unlike some proprietary cartridges, you can get the .50 GI in a variety of bullet weights.

After working for Wilson for a number of years, Alex struck out on his own and formed Guncrafter Industries. Soon after he was joined by Vic Tibbetts, another gunsmith of known (and excellent) reputation. They dusted off the drawings, set about modifying parts, and finished development of the .50 G.I. pistol.

Before we get into the pistol, you have to have a grasp of the cartridge. After all, just how do you go about wedging a .50 cartridge into a pistol designed around a .45? Very carefully is how. First, the case. Basically the case is a chopped and re-rimmed .50 AE. The .50 Action Express is far too long to fit into a normal 1911. And the ballistics of the .50 AE are far too robust: a 300-grain bullet at between 1,200 and 1,300 fps is more than anyone wants to shoot out of a 1911. To make it fit the 1911, Alex and Vic shortened the case. And the cartridge's overall length. Instead of the inch-and-a-half of the .50 AE, the .50 GI has an overall length of just 1.220", which falls within the 1911 magazine length restriction. The rim is another problem. In an ideal engineering world, the rim of the .50 GI would be the same diameter as the case body. However, doing so brings a whole host of additional engineering changes: the location of the ejector and extractor, the width of the breechface and subsequent changes in the sidewall thickness. To allow for a less hassle-prone slide fabrication, Alex and Vic decided to make the rim of the .50 GI the same as that of the .45 ACP. With a seriously

rebated rim, the .50 GI would be asking a lot of its magazines. If the magazine did not hold the top round high enough in feeding, the feed rail of the slide could not be counted on to reliably feed, and the .50 GI would gain a reputation as a bitchy range queen. Other pistols chambered in rebated cartridges have been so branded. I can only surmise that the attention to detail and work that Wilson Combat put into making their 1911 .45 magazines informed Alex, as the .50 GI magazines are beyond excellent. But that is for a bit later.

The .50 GI does not operate at a high pressure, like the other .50 handgun cartridges. Unlike the .50 AE, or the .500 SW, the .50 GI only runs in the low 20,000 range. A “normal” load for the .50 GI is probably not even up to 20,000PSI, and the hot loads don’t exceed .45ACP+P pressures. So the 1911 mechanism isn’t running on the ragged edge of reliability and durability, as such hot-rodged guns as the LAR Grizzly and its .45 Win Mag. Big, powerful from throw-weight, low pressure and reliable to a fault. Gee, where have I heard that formula before?

The Gun

One’s first impression of the .50GI is that it is a big, solid gun. However, you are not overwhelmed, and if you did not know it was a .50 you couldn’t tell at first glance. The slide is normal-width. On top of the Model 1, the sights are Heinie Straight-Eight night sights. As the slots are standard, you could change these for any other Novak-slotted sights. The slide is normally rounded on top, and contoured as you’d expect on the lightening flutes. However, a close look at the bottom rails discloses that the slide has been deformed. Alex knows his stuff. The slide has cocking serrations at the rear, slanted and made with square-bottomed slots. The slide is clean on the left side, and has only “Model No.1” on the right side. The ejection port has been lowered and scalloped.

The barrel is a clue to the caliber: it is massive for a non-comped gun. The muzzle end of the barrel has been made with a cone lockup, and machined to as large a diameter as the slide can be made to accept. The cone lockup requires a reverse recoil spring plug, and there is a full-length guide rod to go with it. I’m not usually a fan of full-length guide rods, but

for this one I'll gladly take the extra weight. The recoil spring is a 22-pound spring. Normally for a .45 you'd be running a 16-or an 18-pound spring. Chuck Taylor, in the old days, was famous for recommending a 20- or even 22-pound spring for a .45, to ensure reliability. Back then some guns (badly dimensioned guns) needed that to wrestle rounds into the chamber. Nowadays, if your gun needs that heavy a spring (in a .45) just to work reliably, you need to have a gunsmith take a look at it. In the .50 GI, where a normal load is a 300-grain bullet at 700 fps, a 22-pound spring becomes the norm. The barrel is a normally-ramped one, without an integral ramp., Given the low normal operating pressures of the .50 GI, an integral ramp is not needed, and might simply complicate feeding.



At first glance the 50GI looks like any other well-made 1911.

The frame is a standard single-stack, without a light rail. The trigger is an aluminum face with three lightening holes, and an overtravel adjustment screw. The trigger pull is clean and crisp, and feels lighter than the scale measures. Only one of the testers guessed it right, at 5 pounds. The rest guessed in the 4-pound range. As the Model No. 1 is meant as a Duty gun,

and not a competition one, the trigger pull is perfect. Were I in the job of kicking down doors, I would not want a light trigger pull. However, were Second Chance still going on, I'd re-tune the trigger down to three and a half, for some really enthusiastic bowling pin whacking. The slide stop is the newer, horizontal-ridge one I've been seeing on more and more 1911s. I like it. The thumb safety is a Swensen-derived design, and is now such a common design that I can't tell who made it. As a brief aside, the advancements in CNC manufacturing, the refinements in parts design and appearance, and the number of manufacturers of even small things like thumb safeties have made it almost impossible to determine who made what. If ten people are making thumb safeties, and they all make pretty much the same designs, who can tell which is which? And given the adaptability of CNC manufacturing, if a customer specifies a small difference, is that a design variation, or simply a one-off production run? In other words, even a program isn't enough to tell who's making what. And given the constantly rising quality of it all, who cares?



The muzzle is a giveaway that you're dealing with something different.



The sights, safety, grip and thumb, and mainspring housing are all perfectly fitted.

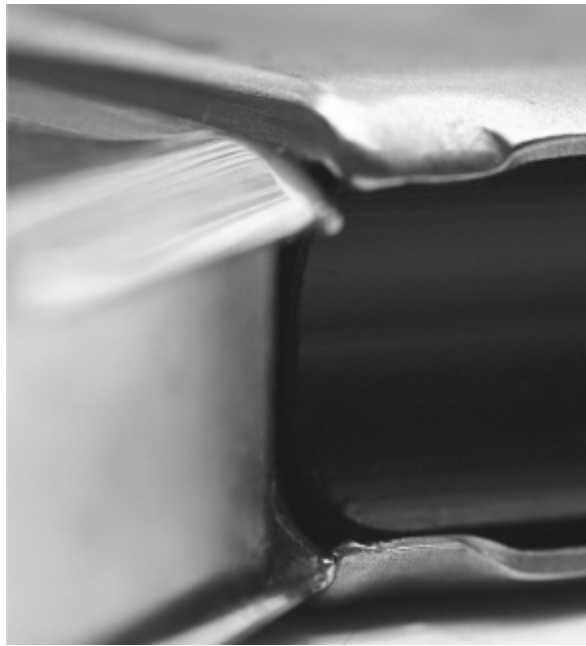


Adding a nice touch, the grips are Alumagrips.

The curve between the trigger guard and the frontstrap has been lifted, but in a very interesting way. On many guns you'll see that the two cuts have simply been run into each other, using a smaller than usual cutting tool. The resulting sharp angle is deburred and finished. On the .50 GI, the lift has been cut as a separate action, using a ball-end cutter. The result is a

tighter radius than normal, but one that is still a radius, and not the blending of two other cuts. If Alex is the only one doing this, I need one. If others do this, then I must start specifying it on my 1911s.

The frontstrap is checkered. At first glance the pattern appears to be an “easy way out” for a hurried gunsmith. Just the center portion is checkered, and the sides are left smooth. However, the checkering is so well-cut that I can’t see that it saved much time. And think about it: when you grasp the frame you put most of the pressure on the center front. Why not just checker there? I have to admit I’m a bit biased: the late Frank Paris did my first custom gun almost 30 years ago with just such a pattern. He didn’t do it as well as Alex, but they both work.



The .50 GI magazines are larger, to accommodate the cartridge.



You get brass from Starline and dies from Hornady.Or get it all from Guncrafter.

At the rear, the grip safety is an Ed Brown. The mainspring housing is straight, checkered, and has the beautiful lanyard loop installation that Alex does. I first saw it on a gun built by Ned Christiansen, and have really liked it ever since.

The clues to the caliber of the Model No. 1 are three, obvious, not-so-obvious, and subtle. The obvious one is the muzzle. One look, and you know “this isn’t your father’s Buick.” The hole is obviously large, and the large, coned muzzle accentuates the bore size. The not so obvious clue is the mag funnel. If you spend a lot of time looking at 1911s, the mag funnel is oddly large. The subtle clue is back at the grip safety. IN order for the larger-than-normal magazine to fit, the frame had to be opened up. The magazine passes through the trigger bow. To clear the mag, the bow had to be made larger. Thus, the slot it rides in had to be larger, and you can see the larger slots on either side of the grip safety. (Remember what I said about engineering changes? Imagine the cascade of changes a full-diameter rim would create. No, best if we didn’t.)

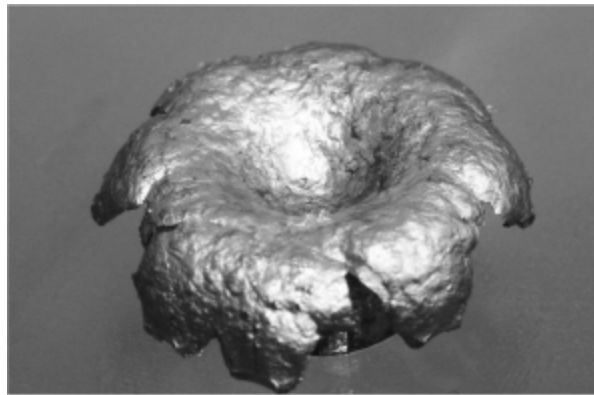
The grips are Alumagrips, with the Guncrafter Industries logo set in the center panel. The finish of the Model No. 1 is a dark, almost black Parkerizing over a toolmark-free surface, with the Alumagrips done in an O.D. Green.

The magazines are worth discussion. The tubes are stainless steel and at first glance appear to be extrusions. Extrusions do not have seams. They are not made by folding and welding sheet metal, but by forcing the steel through a die to create a seamless tube. However, upon disassembly I can see where there was a seam up the spine of the magazine. The exterior has been cleaned up so well you can't tell, but there are faint traces of the weld seam inside. That the maker would go to such lengths is impressive. The magazine tube is longer than a standard 1911, but only as long as a 1911 with a baseplate. What looks like a baseplate on the .50 GI is the retainer, to hold the parts in. The end result is a magazine no longer than a standard with a baseplate, but which maintains the capacity of the standard, holding .50 GI cartridges. The walls of the magazines are thicker than the steel in normal .45 magazines, and the follower is made of plastic, with a metal insert to take the impact of striking the slide stop ledge.

You can get ammo from Guncrafters, you can get brass from Starline, and you can get reloading dies from Hornady. The ammo selection is good, with five loads available and more planned. And reloading is simple: as a large-bore low-pressure round, the .50 GI would be amenable to just about all the fast-to-medium-burn-rate handgun powders. I chrono'd the ammo Alex sent, and shot a bunch of it on pins, poppers, our rifle gongs, and various test media. The softest load, the 300-grain Gold Dot, was "only" going 698 fps, and posted a Power Factor of 209. I've shot a lot of bowling pin ammo that had a PF in that range, and the .50 GI was distinctly softer in recoil than most bowling pin loads. A typical load would be a 230 JHP in a .45 going just over 900 fps, or a 200-grain JHP going just about 1050 fps. Both have noticeable recoil. The .50 GI just has a shove. Going up in power, if what you want is the assurance of expansion (even with a .50) then the 275-grain JHP going 836 fps is your best bet. Despite the advances in bullet design, not all bullets expand on hitting their target. Even if the 275 JHP doesn't, it is still a .500" bullet. For those who want penetration, or are not allowed softpoints or hollowpoints then the choice becomes simpler: do you want a hard-hitting .50, or a harder-hitting .50? The softer of the two is the 300-grain FMJ at 685 fps, a "mere" 210PF. The stout load is the 300-grain Speer TMJ at 814 fps, for a 258PF.



And as if power wasn't enough, it is accurate, too. (Big surprise, eh?)



From one-half to three-quarters of an inch, just like that.



Your basic, textbook expansion of a hollow-point.



Custom barrels, ammo and a hand-built gun. Good-looking power.

If what you're looking for is a bear-country pistol, then the Model No. 1 and this load might be the thing. I can't speak to how well it will penetrate a bruin, but I know it will enthusiastically exit a three-foot thickness of ballistic gelatin. And strike the backstop with a distinct impact. Given that any handgun is a pretty weak reed against any bear, you have to balance the extra penetration and performance of a hard-cast bullet in a .44 M&W J.D. Jones load against the greater capacity, faster shooting, and quicker reload of the .50 GI. For hunting, the .50 GI would be fantastic. As long as you were not trying long-range shots. At close distances the .50 GI can be counted on to shoot through just about anything you'd care to shoot.

I can't say I shot cases and cases of ammo through the Model No. 1. I didn't have cases of ammo to shoot. And I had a lot of other ammo to be reloading, so I couldn't spend my time reloading the ammo I'd shot to put more and more rounds downrange. (Which was a shame, as the .50 GI is a very shoot-able gun.) But what I put downrange was enough to confirm that the Model No. 1 is a reliable pistol.

So, what is this big, tough-as-nails gun good for? Anything a regular 1911 is good for. Were the old Second Chance combat shoot still in operation, I'd have a .50GI as my stock gun. When it comes to shooting bowling pins, mass is king. Or rather, I should say momentum is king. While a pin load that worked well had to have a 195 Power Factor, more was better. With the almost-ubiquitous 200-grain Speer JHP (no longer in production) a 195PF took 975 fps to achieve. A 230-grain bullet took 850 fps. Those who went even heavier found a 265-grain bullet going a "mere" 735 delivered a 195PF, and broomed pins well. At 300-grains, a .50 GI bullet merely needs 650 fps to deliver the threshold Power Factor of 195. Bumping that 300 to a leisurely 700 fps gets you a mild-recoiling pistol that delivers a 210PF, which nearly launches pins into the next Zip code. Oh, to have had it back in the glory days of pin shooting.

Today, were I a door-kicker in Iraq, I'd want one of these. No, it won't penetrate body armor, but not much out of a handgun will. I can get a steel-jacketed or steel-cored 9mm bullet through some vests, but as many have found in Iraq, a non-expanding 9mm bullet is not always the solution to your problems. The .50 GI would penetrate clothing and equipment as well as anything else, and delivers more than the rest once it arrives. As a bigger hammer, it would be quite popular as a sidearm.

As a hunting gun, I can see using it on wild boar. A full metal jacket bullet launched at the upper velocities of the .50GI would penetrate quite nicely. No, it isn't going to shoot through a stack of boar the same way a JD Jones load in a .44 Magnum would, but then again, the .50GI doesn't have the recoil of a 310-grain bullet at 1,250 fps, either. A 300-grain fmj going 850-875 will penetrate to the far shoulder and make a half-inch hole getting there.

Do I want one? Yes. Do I have a need for one? No, but as my brother Mike has been known to say (and more than once) "There you go,

confusing wants and needs again.”

What of the ammo cost? Compared to other calibers, the .50GI is no big deal. Brass is going to last a long time. Even the hottest load has only the pressure of a .45ACP+P, 21,000PSI. At that level, brass lasts a long time. I’ve shot .45 brass at that pressure level until the headstamp has been worn almost smooth, and the .45 brass still works. I can’t imagine the .50 GI brass quitting any sooner. I would not be too keen on shooting the .50GI in a “lost brass” match. At most club matches, you can pick up your brass at each stage, and get almost all of it back. Indeed, many clubs insist you pick up your brass, just to keep the stuff from accumulating and making the place messy. But at bigger matches, there may not be time to let the squad police the brass after each shooter, and you are required to leave your brass where it fell. Some clubs pick it up after the match, some just shovel it to the side. But you don’t get it back. However, in the scheme of things, brass costs aren’t that much. Let’s take the USPSA Nationals as an example. In 2005, the entry fee was \$225. Hotel costs ran about \$375. Travel, food, incidentals, lunch etc, would run \$200 to \$600 depending on where you ate and how often. Add more for airfare and a rental car. The cost of the ammo depends on what caliber you shoot, but you could spend from \$50 (Production, 9mm, bought at Wal-Mart) to \$100 (custom-loaded Super, 40 or 45) In the course of that Nationals you fired just over 300 rounds. 300 empty brass in .50GI runs you a bunch less than \$100. So your lost-brass cost for the match could be on the order of two to three percent of your match expenses. And if you used brass that had been fired a number of times (but not worn out) then you’ve already gotten your brass-cost investment out of it, and can leave it in good conscience.

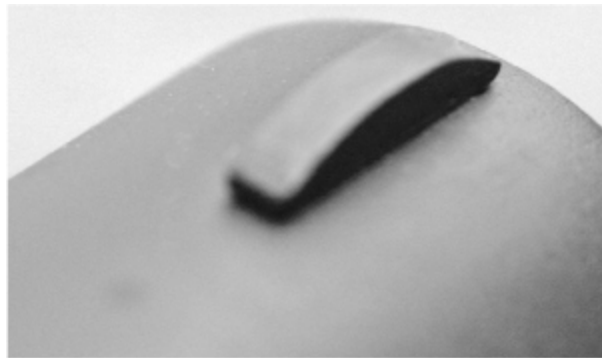
If 50 or 75 bucks is going to kill your wallet, you may wish to consider a cheaper form of entertainment. If you want to show off, but can’t stand the thought of something big and clunky like the Desert Eagle in .50 AE, then perhaps you need to be showing off your new Model No. 1 in .50 GI. For the ultimate show-off, get the conversion kit to shoot either .50 GI or .45 ACP ammo in your Model No.1. As the breechface is proportioned for a .45 ACP rim, you need only a .45 ACP barrel, a softer recoil spring (a 16 pound will do nicely) and .45 ACP magazines to fit the mag well of the .50 GI. The Guncrafter case the .50 GI comes in has room for all that, besides

the #1 and its magazines and instructions. One thing the instructions are careful to point out, and which you should pay attention to, is to not get your recoil springs mixed up. Shooting the .45 with the 22 pound spring will only create malfunctions. But shooting the .50 GI with the 16 pound spring is likely to damage the gun.

One question that comes up is “Can I modify my .45 to be a .50 GI?” It should be pretty clear from the above that you can’t. Yes, the .50 GI barrel could probably be fitted to your gun, but how are you going to get the ammo to feed? It won’t fit in a standard .45 magazine, and the .50 GI mag won’t fit in a standard magazine well. No, if you want to shoot both, you have to start with the big one and work back. Luckily, Alex and Vic make that easy, as they offer a conversion kit to get your .50 into .45 mode.

Rock Island Armory/Arm Scor

Arm Scor is the Arms Corporation of the Philippines. From their beginning in the early 1950s, Arm Scor has expanded and prospered by offering solid, basic guns that competed on the cost end of a cost/benefit analysis. However, in the modern world, inexpensive isn't enough. Arm Scor now makes 1911 pistols, revolvers, rifles and shotguns, a double-action pistol bearing a remarkable resemblance to the CZ-75, and ammunition. They also offer brass and components here in the United States.



The sights are basic, but useable.



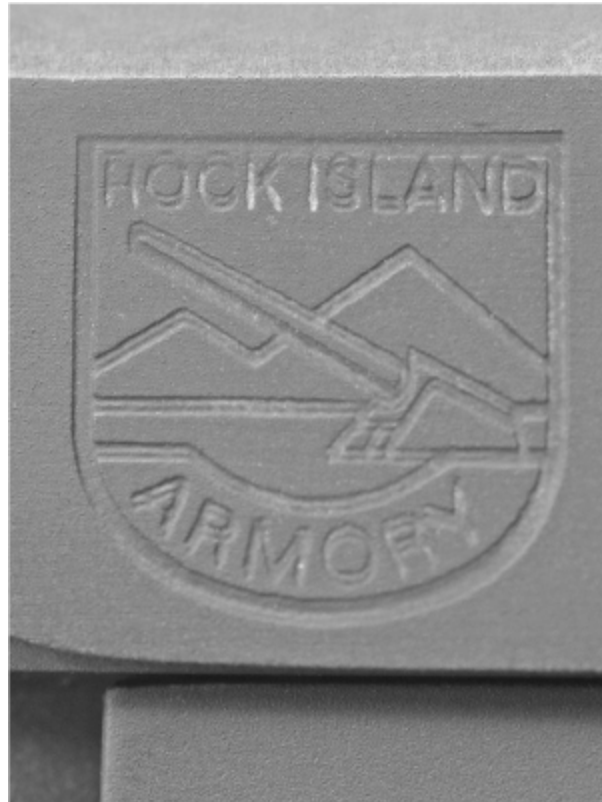
The Rock Island Armory 1911A1, a very solid basic gun.

The guns Armscor sent me were two basic models, one meant as a base gun for building, and the other a base gun that can work just fine as-is. They also sent a bunch of ammo to test in their guns. Being the inquisitive sort, I promptly shot some of it in other 1911s being tested, and tested the Armscor guns not only with their own ammo, but other brands as well.

Rock Island Armory

The old name was the arsenal at which the U.S. Army had a bunch of rifles, handguns and machineguns made. It also overhauled arms between the wars and was a storage depot after WWII. I believe it is still in use, in name anyway, as the Rock Island Arsenal, where they buy weapons and equipment for the Automotive Command, outfitting and overhauling

vehicles. Rock Island Armory is the name of a line of pistols manufactured by and imported from Armscor. A basic, no-frills 1911A1 style handgun, parkerized and meant as either a no-frills basic or a base gun. The one shipped to me in a lockable plastic case with manual, fired case, lock and a magazine from Novak. (More on that in a bit.)



The logo of the RIA 1911A1.



Your standard spur hammer, non beavertail grip safety, and nub of a thumb safety.



The current trend in mainspring housings: flat. Grooved in the old style.



Arms-10 The barrel is better-fitted than a lot of WWII-era government guns.



The RIA got the full dose of mud and dust tests, and passed them all. Here it goes under the soil for the first time.



Gritty mud? The RIA laughs at this test.



The Armscor hi-cap 9mm is a solid 1911 gun you can use as-is or build into something more.

On top, the slide is a mix of old and new. The sights are old, a cross between the skinny old military sights and the “improved” sights Colt offered on guns beginning sometime in the 1960s or so. They won’t be confused for any model of hi-viz competition sights, but they work. The ejection port has the sidewall lowered and the rear scalloped for easier ejection. There are only serrations at the rear. They are vertical, and I suspect the pattern was taken from a mil-spec G.I. 1911A1 left in the Philippines after WW.II. The grip safety tang and the hammer look suspiciously like original 1911 pattern parts, with the short tang and long spur. I fully expected to get nipped when firing it, but I was pleasantly surprised to find the web of my hand unmolested. One of my testers, with much larger and beefier hands than mine, was not so lucky. The right side of the slide lacks markings. On the left, there is “Rock Island Armory” and the RIA logo, I can’t tell if they are rollmarked (I suspect not) etched or milled into the slide, the slide is heavily (and well-done) parkerized, so it isn’t easy to tell how the markings were made.

The frame is plain, standard 1911. No checkering, stippling or grasping grooves. The trigger is long, but lacks an overtravel screw. The thumb

safety is the Colt improved version, wider than the old military, but not much. The grip safety is old style, and lacks a speed bump. The mainspring housing is flat, with vertical grooves in it. The grips are smooth tropical hardwood, nicely figured but a little fat for my tastes. (Some of the testers liked the contour, so you should consider such things as a personal preference.) The surprise came at the magazine well. Nicely beveled, the magazine well opening proved to be a lot easier to speed-load than expected.

The magazine is a Novak, one of Wayne's new ventures. In the old days getting reliable magazines was always a hassle. The task is a lot easier today, but you can never have too many choices when it comes to reliable magazines. The Novak magazine is nicely done, and I cover it thoroughly in the magazine chapter, but it is worth noting that an "entry-level" gun is equipped by the importer with a quality magazine. Someone is paying attention.

I was surprised at how well-fitted the barrel was. While the slide to frame fit was a bit loose, the barrel locked up fore and aft tightly, and the feed ramp was properly done. The barrel was bushing front and standard ramp, with a regular recoil spring assembly. Unlike the old-style safety and sights, the barrel feed ramp was wide and polished, and the frame portion was obviously cleaned up for use with hollowpoints. The slide and frame are cast, and Armscor does not try to hide the fact. They produce very clean castings, and just from looking you might not know the slide was cast. The fit is provided by machining after casting, always the proper way to do it. (Many earlier attempts at casting parts failed in part to false economy: trying to cast critical parts right to dimension, instead of casting large and machining a few thousandths. Those companies are all out of business.)

The trigger was a bit rough. Not rough as in creepy, but rough as in tough to shoot accurately. It dropped the hammer at a consistent seven pounds. There was no overtravel stop, so once you'd pressed for seven pounds worth the trigger kept going during your follow-through. However, seven pounds is within the specifications for the 1911 and 1911A1 in military use for a long time. Were I a door-kicker in Fallujah, I wouldn't quibble over a seven-pound trigger pull provided I could count on the sidearm working dependably. And trigger pulls can be adjusted, even in the

field. A few minutes with a clean flat sear stone and some high-pressure grease, and I'm sure you could get the original parts down to near five pounds, plenty good enough for duty carry.



The external extractor is pure CZ. It works for the Czechs, it works for Armscor. You can't argue with that.



The Armscor hi-cap comes with an ambi safety and hi-ride grip safety already installed.



The hi-cap has forward cocking serrations.



The hi-cap magazine holds lot of ammo for plinking or competition. Just make sure you get the caliber you want, and only load what the match rules allow.

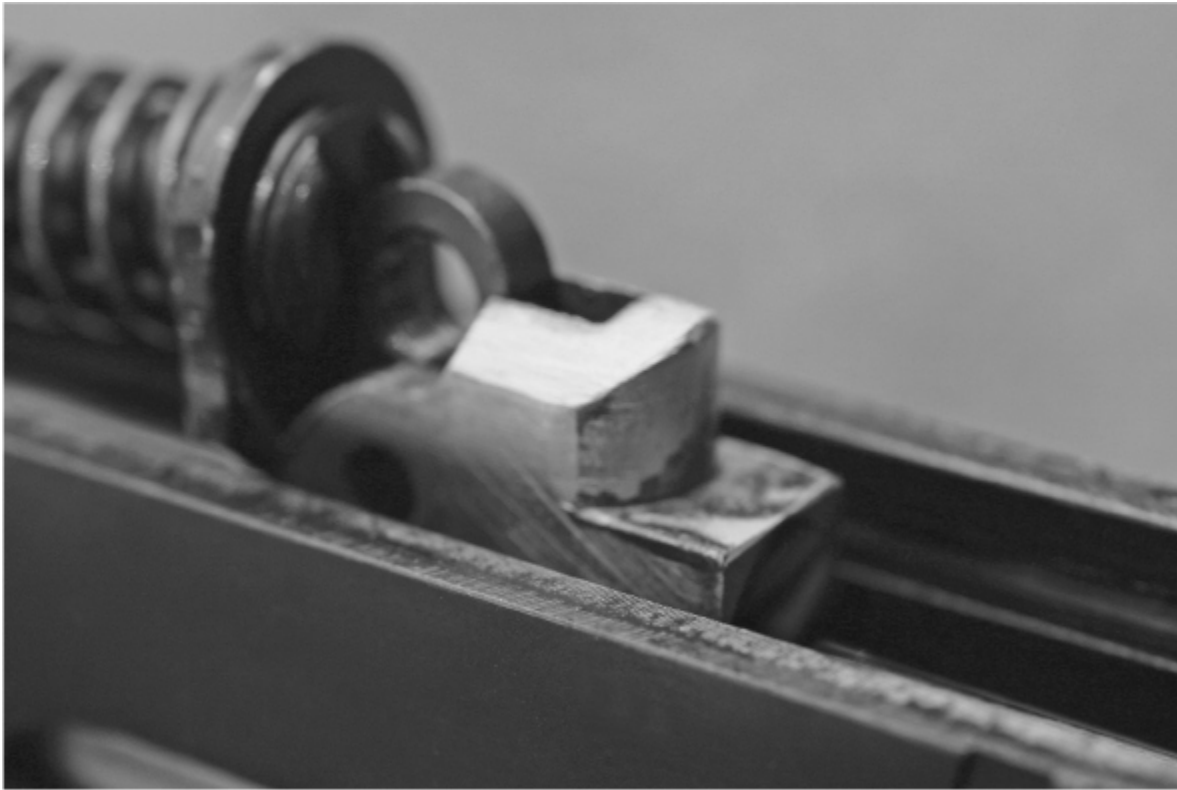
Reliability of the RIA could not be faulted. Using either the Novak magazine, or one of my Wilson, McCormick or Ed Brown magazines I

could not get it to misfeed. It was a bit touchy about which magazines it would lock open with. The interior tab of the slide stop was cut at a rather sharper angle than I would have liked. I suspect that some of the magazines just couldn't connect with the tab and reliably lock the slide back. However, it was not a brand-specific problem, only an occasional problem. We could go a number of magazines and not have the problem, and then get two or three in a row. And not always with the same shooter, although I suspect there was shooter involvement. Two of my testers had the problem to a suspicious degree, while the rest had it happen once and I never had it happen. (But then, firearms like me. They often work for me even when they won't for other shooters.)

In the accuracy department, we can say it is "accurate enough." Many readers fault writers for saying that a handgun has "good combat accuracy." Just what the heck is that? Well, what they're probably trying to find a way to say is a polite way to put "this thing is reliable because it is loose." I won't go that far with the RIA. But it isn't a bulls-eye gun. Feeding it the ammo that is best in most guns, the Oregon Trails 200 grain lead semiwad-cutter loaded over Vihtavuori N310, I could get the occasional group down to four inches. Considering the sights and the trigger, that is a victory. With better sights and a better trigger, I'm sure I could count on it being a solid, all-the-time four inches at twenty-five yards performer. Dropping it in the Ransom rest brought us no joy. It delivered consistent four to five inch groups, with the occasional five-shot cluster down to three. While the barrel is consistently locking up to the slide, the slide and barrel assembly are "floating" on the frame. As the Ransom rest aims the frame, a loose slide is a detriment. In the case of this RIA, not much of one. A lot of practical shooting matches have been won through the decades, and gunfights too, with 1911s that shot no more accurately than this one.

I'd say, for the money involved, the reliability and dependability demonstrated, and the fact that the trigger is easily corrected, that I'd have no problem snatching up a Rock Island Armory pistol as a basic or base gun. For someone not looking to drop two or three grand on a "name" gun, and for those who want something reliable, get one of these. Especially if you plan to learn gunsmithing as you go. The Rock Island is tough enough

you'd really have to work at it to hurt it. (That does not give you free rein with the power tools!)



The Armscor uses a Para Ordnance-pattern ramped barrel.

Extra tests

Along with the standard testing done to get a feel for the reliability and accuracy of the Rock Island pistol, I received permission from Armscor to subject it to some abusive testing. I buried it in dirt, I sloshed it in mud, I even shot it underwater. It did not fail. I did not try the really abusive tests that some like, such as dropping it from a multistory building or rappelling tower. I wouldn't survive such a fall, so why should I expect to be using my sidearm after such a fall? For the complete gory (or gooey) details head over the Chapter Four, Mud and Dusts Tests.

9 mm Armscor

Not all 1911s are single-stack and .45. The second pistol Armscor sent is an interesting one, and most likely intended to be rebuilt as a competition gun. The 1911-A2 is better kitted-out (as the British would say) than the RIA gun they sent. The slide is serrated front and back, with wide-groove serrations. The sights are dovetailed front and back. The front is Armscor's own, in a Novak dovetail, and the rear is a real, honest to goodness Novak rear sight. The top is rounded in the standard contour, and the sides are clean on the right, with the name Armscor heavily etched on the left. The name is left in the white. The ejection port is not lowered much, but heavily beveled on the inside. The extractor? The moment I saw it, I thought to myself "that looks like a CZ extractor." I went back into the Armscor catalog and sure enough, they make double action pistols that are CZ clones. For the external extractor 1911, they simply designed a slide to take the CZ extractor.

The slide and frame are cast. The finish is a semi-gloss blue. It looks like they polished it, and then "knocked back" the polish just a bit with a light application of a very fine sugarblasting. The effect is quite nice. It also seems to be quite durable. I didn't hit the gun with a belt sander or anything, but in a couple of months of range trips, test firing and general handling, I can't see any wear in the blue.

The barrel is an integral-ramped barrel, using a Para ramp lower lug, with a standard busing up front. The recoil spring wraps around a full-length guide rod. The barrel has a bit of up and down play when closed, and the slide rocks a small amount on the frame. However, the looseness did not impair later accuracy testing.



Arms-25 Six shots from the bench, 25, and under 2 inches. That'll do for a whole lot of matches.

The controls are a standard slide stop, and an ambidextrous thumb safety. The safety appears to be a King's, with the right-side paddle held in place by means of an over-long and slotted sear pin. The grip safety is definitely Ed Brown in appearance, and has a modest speed bump on the bottom. The grip safety was properly adjusted, so it blocked the trigger when untouched, but did not have to be pressed more than a third of its travel to allow the trigger to clear. The trigger is curved and lacks an overtravel screw. I found the curve to be a bit off-putting during dry-firing, but didn't notice it when shooting. Some of my testers with larger hands found the trigger curve was too tight, and they could definitely feel the trigger contacting their finger top and bottom, but not in the middle. If you find it objectionable the trigger is easily modified. Trigger pull is an entirely serviceable four pounds, with a clean release. The magazine button sits taller than normal off the frame side.

The grips are checkered plastic, black. The mainspring housing is flat and grooved.

The big thing to notice is the magazine and caliber. The magazine is a double-stack, for high capacity. The caliber is 9mm. The frame looks very much like a hi-cap Para-Ordnance, and the Para magazines I had available fit and functioned. You could use Para mags, Mec-Gar or one of the STI/SVI-for-Para tubes. Why 9? Why not? In .40 this would be a very good base gun for a Limited Division gun in USPSA. In 9, it is a hi-volume blaster that you could use as-is, or build into an Open Division gun.

In function, the Armscor 9 mm proved just a bit touchy. It worked without fail with the Armscor 9 mm ammunition they sent. You'd expect that, after all, what ammo do you think they are test-firing the guns at the factory with? The problem came with lightweight hollowpoints. Some 115-grain jhp's were a bit cranky about feeding. They'd stub against the feed ramp below where they are supposed to be hitting, and would not carry up. I was not surprised to find it happening occasionally. The Para hi-cap magazine tubes are proportioned for .45 ACP rounds. Their front-to-back dimension is long for the 9 mm Parabellum. Long fmj bullets, or heavy bullets have no problems feeding. However, shorter and lighter bullets will have a bit more time (speaking in milliseconds here) to tip downwards as the slide strikes the upper rear of the rim, and can hit the ramp too low. That said, the problem was getting to be less of a problem as time went on and we fired more ammo through it. And, with the huge volume of 9 mm ammunition available, finding what it likes and sticking with that ammo should not be a problem. Reloaders also won't have a problem, as they can simply adjust the overall length of their ammunition so as to present the Armscor with ammo it likes. Be aware that this is a problem that the Armscor is not the sole heir to. Any hi-cap pistol with a magazine originally designed for the .45 ACP can have this problem. Some have it more than others, and some guns (individuals, not brands) do not have it at all.

I did not have a Ransom insert for the Para hi-cap. (An oversight that I will have to correct) So I shot the Armscor over sandbags. For an unassuming gun, it shot very nicely. With plain old fmj ammo, or lead round-nose reloads, you could count on getting groups under four inches all the time. When I fed it some Hornady XTP it really perked up. The best

was the 124 jhp, with which I punched a group just under 2 inches, and the rest under 3.

So, what future is there for such a beast? Well, as a blaster to use up the incredible supply of inexpensive imported 9 mm ammo, it would be great. You would find it a real anchor as a carry gun. All steel, and loaded with 18 rounds of 9 mm, you'd be dragging it behind you by the end of the day. If the weight of the Armscor 9 makes the IDPA limits, then you could have a very good ESP gun. You'll have to load it only with 10-round magazines, but that isn't a problem. They're everywhere. As a base gun to build a USPSA Open Division gun on, it would be a very good start. For those looking for a heavy gun it would be perfect. Some Open shooters like light guns, others heavy guns. Built to Open standards, I could see this tripping the scales close to 50 ounces. Lots of weight there to soak up recoil.

If you're looking for a plain blaster, or a base gun to build on in a single-stack 1911 in .45, the Rock Island Armory 1911 would be a good start. You can depend on it working, and then build and change as you find the finances or desire. You could even do some of the work yourself. If you want to build up the 9 as an Open gun, find an IPSC-oriented gunsmith who works on Para, and he won't have any surprises. This same gun in .40 would be a good base for a Limited Division gun in USPSA competition, or an ESP-class gun in IDPA.



The RIA shipped with a Novak magazine, an excellent new magazine you should look at.

Dan Wesson

Those of you with a bit of history reading gun magazines and books may be thinking to yourself “Dan Wesson, that sounds familiar.....” Yes, the Wesson family descended from the Wesson of Smith & Wesson. Some 30 years ago they created a new take on revolvers. The Dan Wesson of the 1970s was a new approach on revolvers. The changes were many. It used coil springs instead of leaf springs. The frame where the grips went was a simple post, instead of an outline. You could bolt on a grip of any size or shape. The barrels were user-changeable. You simply unscrewed the muzzle nut, slipped the shroud off, unscrewed the barrel, and replaced with a longer, shorter, heavier or lighter one. Since the owner was installing the barrel, you could adjust cylinder gap to what you wanted. One result of a barrel so constructed was the tensioning (the barrel was, in effect, tightened from the muzzle, stretching it) acted to stiffen the barrel. Dan Wesson revolvers were remarkably accurate.



The Pointman Seven comes complete with all the necessary goodies; magazines, owners manual, calbe lock, fired case. Well, some are necessary.

One drawback (considered at the time) was the cylinder latch. Since there was no front lockup, like a S&W, the cylinder lock was on the crane, in front of the cylinder. You had to use your left thumb to unlock it. No big deal, but revolver shooters back then were remarkably conservative. (Shocking, I know, but they were.) So it never really caught on. Police departments weren't impressed. They had not yet had the shock of the FBI being sued (and losing) over the "disparate impact" of grip size. And barrel lengths? If they wanted different lengths, they'd order them, or have the departmental armorer change barrels. One use where the Dan Wessons caught on was metallic silhouette. There, the accuracy was well-received. Users could install the exact barrel length they desired, and replace barrels

as they wore. And M-S shooters wore barrels. Standard Magnum loads were a bit light for their steel targets, so silhouette shooters were well-known for loading past book specs.

But how does all this get us to 1911s? With machinery, personnel, and not getting much traction in the revolver market, it was only a matter of time before Dan Wesson got into the 1911 market. They were just getting into it when the first volume of the Gun Digest Book of the 1911 was in process. So much so that they were still working out the production bugs when the manuscript had to go to the printer, and thus were not in the first book. In a scary symmetry, they almost missed this volume, too. (Which would have been a shame.) As I was writing the book, my request for sample guns hit a snag: Dan Wesson was being bought. When the situation at hand is the purchase of a gun company, loaner requests of gun writers drops to the bottom of the stack of “Things To Do Today.” And until the purchase either went through, or was declined, no guns were getting out. No problem, we had months to go. Yes, well, there is a reason it is “Murphy’s Law” and not “Murphy’s Suggestion.” The first thing the new owners (Dan Wesson was bought by CZ-USA, an aggressive and first-rate group of gun guys) did was look over the models, features, production and inspection, and raise the already high levels. Which meant they certainly did not want me reviewing the old models, to be glorified in print for years to come. They wanted the new guns tested and reported on.

Which is how I came to have perhaps the first guns off the new production by Dan Wesson on my doorstep. And as late as they arrived, they were the last guns I tested. The brass from the morning’s test-fire session is still warm as I write this.

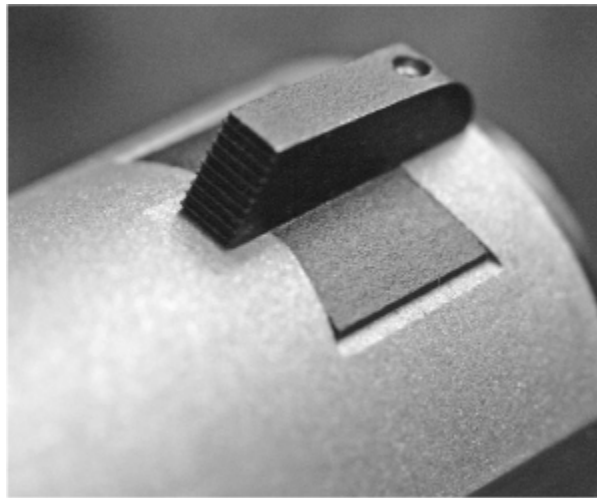
Dan Wesson sent me two guns; a Pointman Seven and a Commander Bobtail. Both arrived in Midway pistol cases.

Pointman Seven

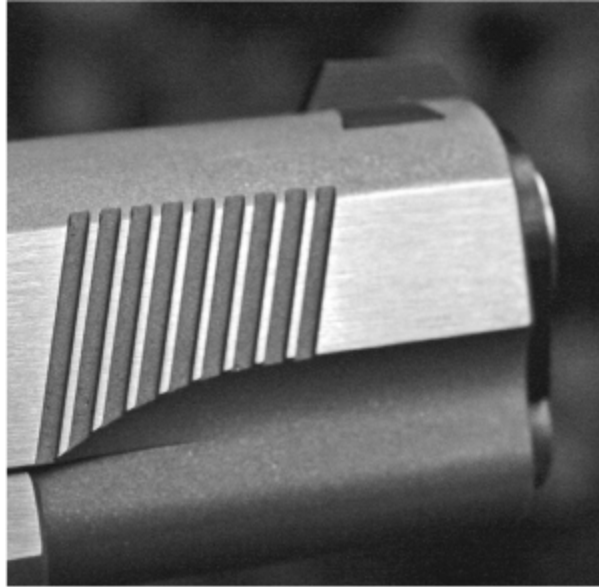
The PM-7 is a Government-size pistol, in stainless steel. The sights are a Novak front, serrated, with an adjustable rear sight that screams “Bo-Mar” even though it is marked Dan Wesson and has the Dan Wesson logo on it. The rear sight machining is beautifully done. The rear of the blade step is

“fenced” that is it has the sides retained, instead of simply milling the step straight across the rear of the slide. The sight is also dropped as low in the slide as possible, with the front of the sight body almost flush with the top arc of the slide. The front sight is rather low, at only .150” high, and the rear blade is propped up .075”, which indicates the rear of the barrel is locked up a bit high. If this is just one gun, then the fitting may be off, or the parts may not line up as expected. If every gun comes off the line like this, then Dan Wesson should be looking into it.

The slide is matted/bead-blasted on top, with the flats left in their surface-ground finish. There are angled cocking serrations front and rear. The ejection port has been lowered (the siderail is .445”) beveled and has a small scallop at the rear. The slide is marked only on the left side, just forward of the cocking serrations. There you’ll find the Dan Wesson logo, and “PM7” rollmarked or laser-etched. If rollmarked, it was rollmarked before the last pass of the surface grind of the flats, as there is no raised area around the markings.



The PM-7 front sight is ramped, serrated, a bit low, and lacking dots of any kind.



Cocking serrations up front.



The Dan Wesson match barrel, and an accurate one it is, too.



The Bo-Mar style rear sight is marked with the Dan Wesson logo.



A very nicely fitted grip safety and thumb safety make the Pointman Seven a very comfortable 1911 to shoot.



The Pointman uses a full-length guide rod.

The barrel is a Dan Wesson match barrel in .45 ACP, with a standard ramp, standard bushing, and full-length guide rod. The barrel has a bushing swell of .010" and interestingly enough, the bushing is blued, on a stainless gun. The recoil spring feels noticeably heavier than other guns shipped, and measured out at 18.5 pounds on my SDM scale. The lockup of the barrel I bank-vault tight, and the fit of slide to frame shows no wobble at all. The barrel did occasionally show a "knuckle bind" in hand-cycling, but that went away after a day of shooting.

The extractor, ejector and firing pin plate are all blued, to match the bushing.

The frame is a standard government frame, lacking a light rail. (Not everyone wants a black tactical "Special Ops" gun.) The frame flats are surface-ground, and the radiuses are bead-blasted, to match the finish of the slide. The slide stop is standard, with grooves on top. The thumb safety is a Chip McCormick, or so close that if Dan Wesson isn't getting them from Chip he should be complaining about it. The grip safety is an Ed Brown, with speed bump on the bottom. The hammer is another CMC part, from

the looks of it. The trigger is an aluminum extended trigger, with an overtravel stop in it. The trigger pull is heavy enough to be fine for Duty, and light enough to be fine for competition. At just under five pounds it is very crisp, although it came with more overtravel than some might like. As a long-time revolver shooter I find all the fuss about overtravel to be somewhat amusing. But there are many shooters who prefer their overtravel to be less than what this particular Pointman has. With the screw in the trigger, that is easy to change.

The frame is laser-etched on the right side with the Dan Wesson address and the serial number. Unlike the slide, the laser-etching on the frame was done after the last surface-grind, and you can feel the roughness of the letters. It doesn't have any cosmetic or functional difference, just something noticeable if you run your fingertips across both sets.

The mag catch is grooved, standard and shows a part line from having been cast or MIM'd. As the mag catch isn't a high-stress part, I have no worries about it being cast or MIM'd. It is well-made and fitted, and worked just fine through the testing. I'd expect it to do so for as long as you'd need. The triggerguard/frontstrap curve is standard 1911, and hasn't been "lifted." The frontstrp is smooth but heavily bead-blasted. The mainspring housing is flat, checkered, stainless and a nice touch. The mag well has been slightly beveled on three sides. The bevel is enough to help without weakening the frame, and easy to match if you were to install an S&A mag well funnel or other such competition aid.



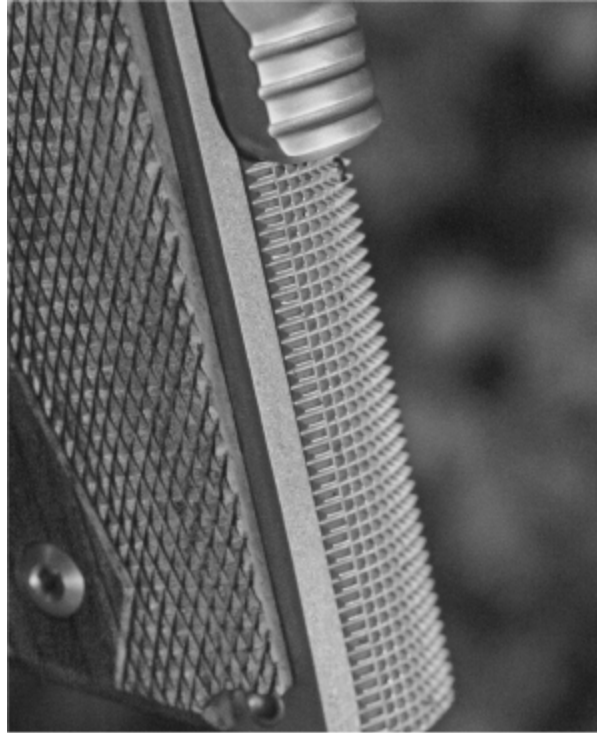
Dan Wesson has their own magazines. While reliable, I'm not optimistic about their long-term ruggedness. We'll see.

The grips are nicely figured reddish wood, with a double diamond checkering pattern. Just a little thick for my tastes, which are not the same as many 1911 shooters. I'm sure many shooters will find the grips to be just the right size for them. The grip screws are stainless allen-head.

Inside the Midway case, Dan Wesson shipped the gun with two magazines. They are blued, old-style and marked with the Dan Wesson logo. With all due respects to Dan Wesson, you should consider these magazine disposable. Use them until they break or otherwise cause a malfunction, and then toss them in the trash without a second thought. Invest no time, effort, nor money into upgrading them with new springs, followers or buffer pads. Also in the case were a blue plastic bushing wrench, owner's manual and the fired case in its envelope for the idiotic fired-case requirements in various People's Republics such as Maryland and California. Interestingly, the label remarks that the rifling of the Dan Wesson is one turn in ten inches, with six lands and grooves. Ten inches is a bit fast for the .45 ACP, where one turn in sixteen inches is often the standard.



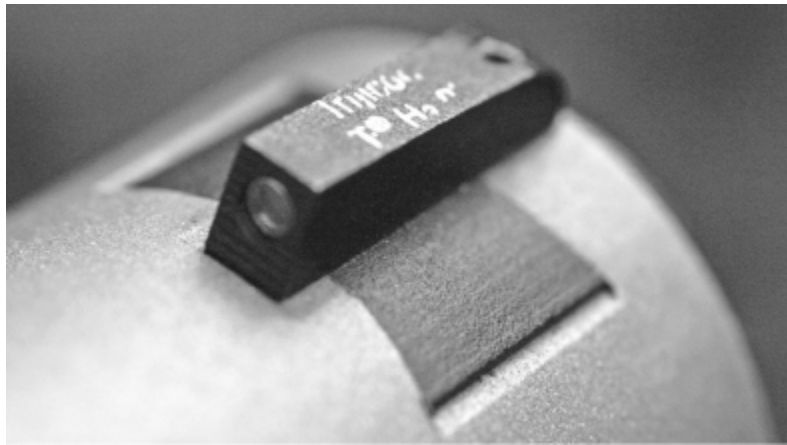
The magazine well has a functional, and unobtrusive, bevel job done to it.



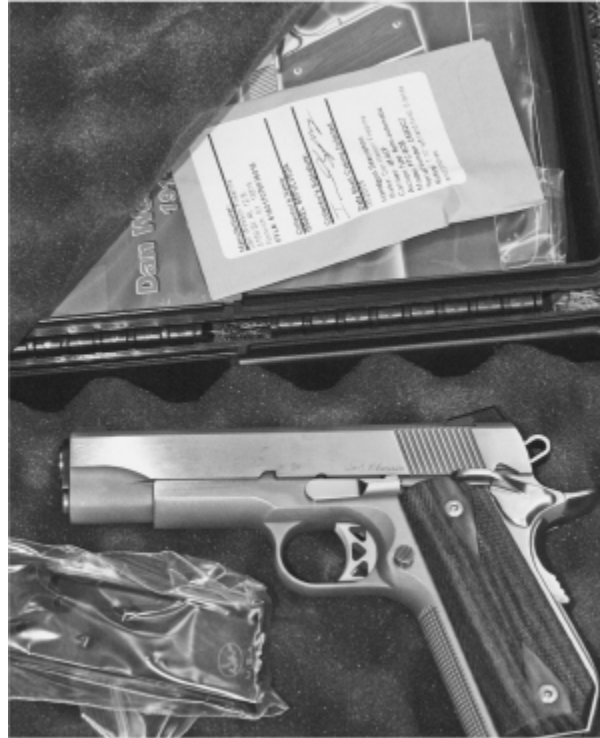
Yet another flat mainspring housing. This one is nicely checkered.

In testing, I used the provided magazines just to see how they'd hold up. For the limited test, they did fine. I started (as usual) by putting a few boxes of 230 hardball through it, to check function and zero. The brass didn't get far, a function of the heavy recoil spring and the rather short (although longer than mil spec) ejector. But it did eject reliably and consistently. The sights were "On" and I didn't have to do any adjusting to the Bo-Mar looking rear sight. It shot as reliably, and more accurately, with the Oregon Trails 200-grain lead semi wadcutters. It also fed without complaint all the various hollowpoints and flatpoint bullets I had to test. In all, it performed as you would expect, and desire, a 1911 to. The all-steel construction dampened felt recoil. The roundish grips were a slight problem for me. At speed I could see the Pointman 7 not indexing straight. I tended to squirm in my grip more than a pistol with flatter grips would. However, that is a personal preference of mine, and my test-fire crew has not reported such a problem for them on other guns with equally thick grips. Part of the problem (at least for me) was that not only were the grips a bit fatter, but they were also not arced like others. For instance, the next pistol on the bench (as I write this) is the Colt Special Combat. The grips on the Colt

measure 1.32", while the Pointman 7 measures 1.28" wide. And yet the Colt feels better to me. Why? The Colt grips taper more. The last row of checkering (it isn't easy to find a spot to measure) come down to .93" while on the Pointman the grips are .98" I can see someone rolling their eyes as they read this. "Sweeney is carping about a grip difference of only .05"? What's that about?" Well, I can tell the difference between them with my eyes closed. I can also see the difference in where my fingertips end up on the grips. As much as I like the Pointman, I'd change the grips right away.



The Classic has a three-dot tritium night sight setup.



The Classic is a Commander-sized 1911 with a difference. And all the goodies.



Novak sights with the new patented side grooves.



A stainless gun with blued steel accents has a very sharp look about it. The Classic is a nive-looking gun.

Dan Wesson Classic

Also known as the Commander Bobtail, the second gun Dan Wesson sent me is a very nice carry gun indeed, if you can put up with the weight. (For what this gun does, I think I could manage that.) The differences are many, and demonstrate what Dan Wesson is capable of. First, it is a Commander size, all steel. Stainless steel. As with the Pointman, the flats have been surface ground, and the radiused sections of the slide and frame have been left bed-blasted and matte.

On the slide, the sights are Novak front and rear. They have Trijicon inserts, and the rear sight has the patented grooves for cosmetics and grasping that we've begun to see on a number of guns. The arc of the rear of the slide and the sight have been beautifully mated. It isn't unusual for some custom installations of the Novak rear to have a slight mismatch between rear face of the slide and the rear face of the sight. Here. The join line is so tight that while you can feel it you can't get your fingernail to catch in it. The front sight is a tad short for me, at .135" but you can't see

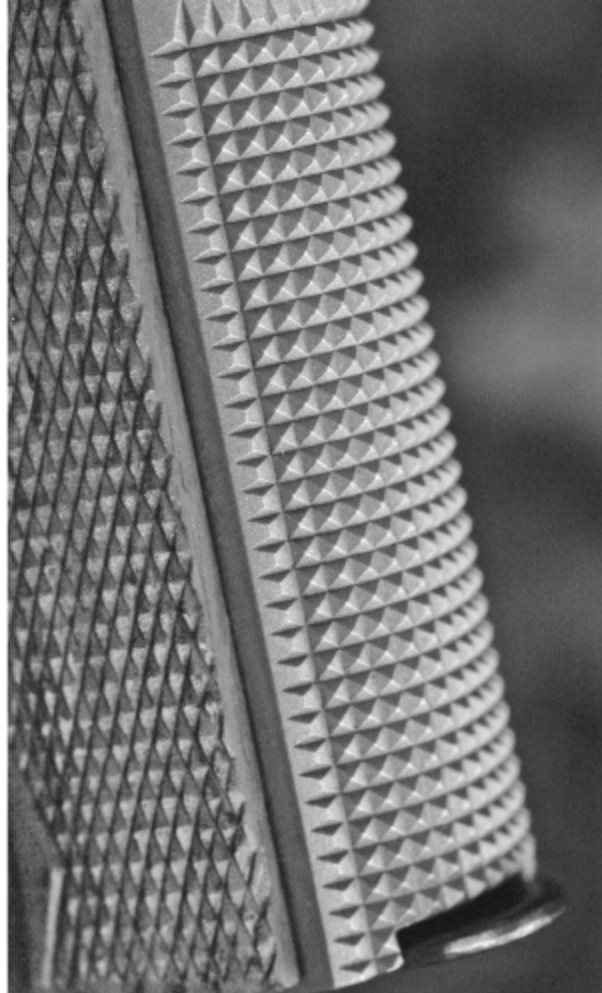
the top of the slide through the rear notch when the sights are lined up. I just like a taller front blade than that, even if it means a taller rear and a slightly taller gun. The ejection port has been lowered some, with a sidewall of .410" and beveled inside and scalloped on the rear. The slide has cocking serrations only at the rear. The only marking on the slide is just in front of the cocking serrations, on the left side. There you'll find the Dan Wesson logo, and in script, "Classic."

The barrel is a Dan Wesson, .45 ACP and marked Match. As with the Pointman the bushing is blued, but the Classic has a standard recoil setup, guide and retainer, without a full-length rod. The barrel arrived with a marked amount more of chamber rubbing than the Pointman did. The Classic's barrel also could be pushed down out of lockup when closed. The slide to frame fit was not loose, but I could feel a bit of play when wrestling the slide and frame. The recoil spring was a standard commander 20-pound spring.

The frame is without light rail, not a problem for a concealed carry gun. As with the Pointman, the slide stop, thumb safety and hammer appear to be Chip McCormick, and the grip safety Ed Brown. The Classic has the same three triangular-holed trigger, but the trigger pull was heavier (just over five pounds) and had much less over travel than the Pointman. The magazine catch is identical to that of the Pointman. So are the grips, except where they have to accommodate the frame alteration. Grips are easy to change, so I would not worry were I packing this gun.



Three holes of a different shape, a checkered front-strap, but not lifted at the triggerguard.



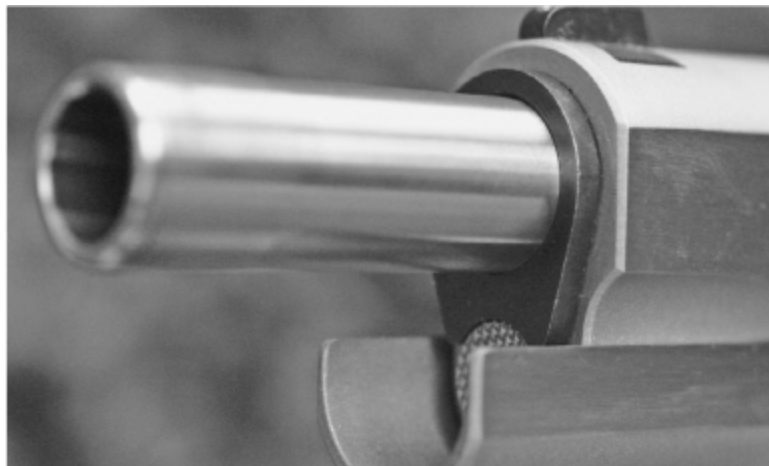
The checkering is well done, offers a non-slip grip, and doesn't chew your hands up.



The Bobtail conversion makes a compact gun even more concealable.



Unlike the Pointman, the Classic has a standard recoil spring setup.



No need for guide rods on a Commander.



The Classic is also beveled at the mag well.

The curve from the triggerguard to the front-strap is standard, but the frontstrap is not. The checkering is machine-cut, 20 lines to the inch, and done before the bead-blasting was done to the frame. They are not perfect diamonds, but perfect checkering at 20 to the inch can draw blood on shooters with soft hands. If you want the greater grip, it would be easy enough for a gunsmith to hand-sharpen the checkering. The lines are perfectly straight, so he (or she) would simply follow them with a triangular file. Just be warned that should you opt for such an upgrade, your wallet will suffer. And your hands, too until they toughen up. The checkering is perfectly fine to provide a non-slip grip. And unless someone looks closely they aren't going to notice the lines weren't hand-cut. Unless it just won't leave you alone, leave the checkering as-is and concentrate on your shooting. The other big change from the Pointman is the mainspring housing. The Bobtail conversion was originated by Ed Brown. In the old days we'd use sacrificial guns to test out ideas, or make dummies from bar stock. Ed just fired up his CAD-CAM software and fussed over it until it came out right. He makes mainspring housings to match, and tooling to cut the frames. There are a number of gunsmiths who offer the conversion. But you can get it from Dan Wesson already done.

What is the advantage of the Bobtail? Conceal-ability. Carrying a gun concealed is a hassle. The painful part is the barrel. (Or on a revolver, the barrel and cylinder.) For many people, trying to carry a Government Model concealed is just a literal pain in the ... back. The muzzle hits your hip, the gun pivots, and the grip safety gets jammed up near your kidney. I know, I carried a Government Model for many years. The commander makes that

part a lot easier. The three-quarters of an inch less length may not seem like much, but it can make a huge difference at the end of the day. On the other end, you have the pointed heel of the frame sticking up in the air. Worse yet, the checkering or grooves that are there can catch on clothing, and "tent" up your shirt, jacket, windbreaker or vest. The Bobtail does two things: it removes that corner, so your gun has less to catch and tent on clothing. And the smooth surface lets cloth slide off the mainspring housing to reduce the chances of tenting even on the shorter corner.

Worry not that the removed parts cause a change in your grip. The missing steel doesn't contact the hands of very many shooters at all. I have large but skinny hands, and I don't notice any change in my grip at all. You'd have to have huge, fleshy hands to notice a change. And with hands that big, your problem is more likely to be getting your trigger finger into the triggerguard.

Last, the magazine well is beveled just as the Pointman was, a small but useful amount, without weakening the frame.

In the box with the Classic, as with the Point-man, were the blue plastic bushing wrench, owner's manual and fired cartridge case. Oh, and the same brand of seven-shot magazines. As with the Pointman, I used the provided magazines just to see how they'd hold up. Perhaps I'm being too harsh on them, but they have the hallmarks of the old-style magazines that we all fussed and worried over in the old days, and which let us down too often. If you're going to shoot competitively you'll need more magazines anyway. Set these aside for practice, and compete with something better. Something like Wilson, CMC or Ed Brown. If you plan to carry the Classic for defense, again use these magazines for practice and carry the name-brand magazines.



A tad heavy, but if you can pack the extra few ounces the Classic is a first-rate carry gun.

In testing, the heft of the Classic helped dampen felt recoil. The decision you have to make is this: is the lesser recoil worth packing the extra weight? Before you jump in and answer, holster design has a lot to do with it. A loose, floppy, ill-fitting holster will be uncomfortable regardless of how light the gun may be. And a proper holster will be a lot more comfortable than you'd imagine. For me, the baseline of performance is the ancient Gordon Davis Summer Special I have. I wore it to Gunsite four times, I carried various guns in it for nearly twenty years, through a hit and nearly-run, and more than one close encounter of the armed kind. The Classic fits my holster perfectly, and tucked away it can ride there all day without being a burden.

As expected, it gobbled up its introductory dose of Black Hills 230 hardball without a problem. Moving on, I subjected it to various hollow-points, and the Oregon Trail 200-grain semi wad-cutter. Again, complete success. However, with the heavier bullets it got a little cranky. I had one

failure to ride up with the NEI 240 flat nose, cast of wheelweights. Interesting. The old Lyman 265-grain semi wadcutters were not fun at all. With the Dan Wesson magazines they fed with pretty regular stoppages. Every other magazine I could count on a bullet stubbing on the feed ramp. Switching to Chip McCormick Powermags I was able to get 50 rounds downrange without a problem. Until I had this problem, I was beginning to think I'd lost my touch. I mean, going a whole book, and a couple of dozen test guns, without failure, is not what gunwriters do, right? I cannot blame the Classic, however. The bullet in question was designed by Lyman to be loaded in Colt Single Action Army revolvers chambered in .45 Colt. There, they made the mold to a .454" For those of us with other plans, they made some in .452" and that is what I have. It was never intended to go into .45 ACP or Auto Rim cases, let alone be fed out of a magazine. I have seen hand-built custom guns that refused to feed any of it, let alone a malfunction every other magazine. I used it back when Second Chance was on, and there it dispatched pins with authority. However, it does not feed in all guns. It doesn't even feed in every 1911 I own. So Dan Wesson should be proud of the fact that one gun feeds it 100 percent, while the other comes close. I'm sure with a bit of work, a good 1911 'smith could have it feeding 100 percent. Why is another matter. The only use I can see for the bullet now is as an impromptu bear gun. If you have a 1911, and are willing to heavily-spring it, and you load your own ammo, and you are willing to test and tune, it can work in a pinch. I only ever loaded it to 750 fps, where the 200PF broomed pins off well. Cast from wheelweights, it is harder than sin. If you were to load with a slow-burning pistol powder like SR-4756 or Vihtavouri N-350, you could get 900 fps out of the bullet. (There is .45 Colt data showing 900 fps, and the pressure ceiling for the .45 Colt is 14,000PSI, vs. the 17,000PSI for .45 ACP. .45 ACP+P runs up to 21,000.) There, you'd have a power factor of 238, and as much penetration as you can expect from a .45 ACP. You won't "shoot through a moose" but you can expect useful penetration.

The accuracy of the Classic was close behind that of the Pointman 7. The shorter sight radius means you give up a small amount of accuracy, the slightly lighter weight (compared to a Government Model) means you get hit harder. But the compact size, and the Bobtail, make carrying and staying

concealed a lot easier. And the accuracy, while short of Bull's-eye standards, is plenty good enough for anything else. I closed the test session by using some of the Oregon Trails 200-grain bullet over Vihtavuori N-310 load, on the 100-yard gong at the club. Ten shots and nine hits (with one mashed trigger pull) later, I knew all anyone needs to know: this gun is one you should not pass up.

The Dan Wesson guns are well-fitted, well-designed and worked very well indeed. Do not pass them over because you need a "name" gun to impress your shooting buddies. Let the Dan Wesson do your talking.

Detonics

The Detonics name is an old one in the history of modern practical shooting. Back in “the day” getting a compact pistol was not easy. Colt made two sizes; the Government Model and the Commander. The Commander came in either lightweight or steel-framed versions. Those were your choices. However, you could, if you were willing to spend buckets of money, get a gun cut down. You could send your gun and a whopping check off to Charlie Kelsey at Devel, or Austin Behlert, and they’d shorten your pistol on both the slide and barrel end, and the magazine end.

Detonics was one of the first production guns smaller than the standard factory fare. And the timeframe shows it. Coming out in the mid 1970s, the Detonics had a swoopy rear section on the slide, with the rear sight forward of the scalloped area. Why? Back then many people were still under the impression that the correct way to carry a 1911 was with the hammer down, and cock on the draw. I suppose, if you wanted to make your life more difficult, you could do that. You also risk dropping the gun, and getting a bad grip on it for firing. The real problem with the approach is getting the hammer down in the first place. The only way to drop the hammer on a 1911 is by pulling the trigger. If, while pulling the trigger your fingers slip on the hammer, the hammer will fall. The pistol will fire. You will have put a hole through something. If you’re lucky, it will be a hole in an inanimate object, one that you can repair or replace. If you’re unlucky it will be something really expensive (like the chief’s personal vehicle). Worst case, you just shot someone. So, don’t go lowering the hammer.



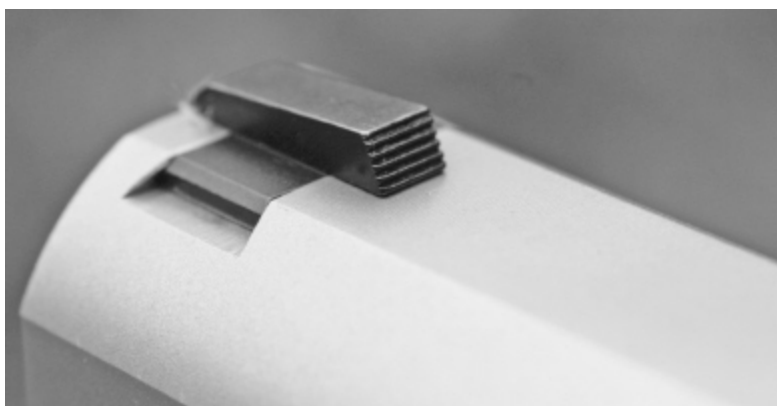
The CombatMaster comes with magazine, instruction, a test target. And a history.



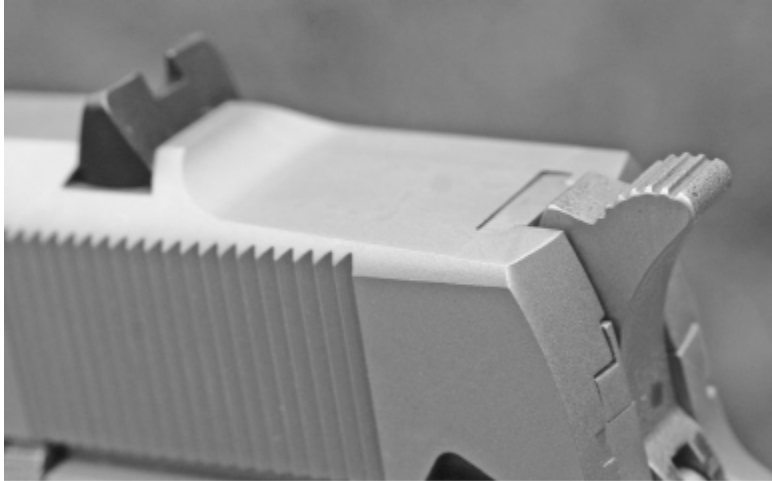
The logo looks like it was cut with a ball end mill, and a patterning program. It looks good.



Despite the compact size and the lack of a beavertail, the CombatMaster does not bite. Not on this end.



The front sight is a Novak-pattern, so you can change it if you want to.



The rear sight, and rear of the slide, are designed for thumb-cocking on the draw.



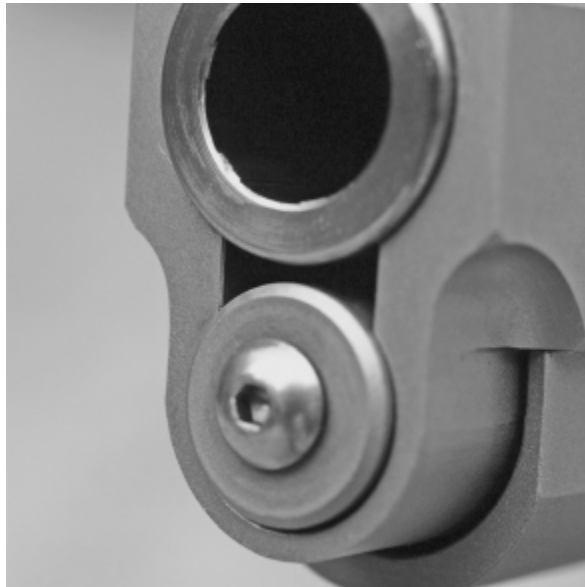
The grips are well done, and feature the Detonics logo.



The Detonics compacts gained fame for being the first compact that was a purpose-built gun, not a cut-down model. And for appearing in *Miami Vice* where Don Johnson packed one in an ankle holster. However, the company fell on hard times in the late 1980s. The compact and sub-compact gun was such an appealing idea that the main manufacturers themselves got into the business. S&W started offering so many versions of compact DA pistols that they put Devel out of business. Other gunsmiths started doing compact guns. For a while it was almost a rite of passage: if you wanted to show you had “arrived” as a custom gunsmith, you’d chop something to compact or smaller sizes, and get it into the hands of a gun writer. Combined with the “WonderNine Wars” and a compact single action pistol was suddenly on the outs. During the 1980s, police departments started switching to the 9mm from the .38/.357. One big draw for the change was capacity: instead of six rounds they could have 15 to 18. Then many did it all over again in the 1990s, dumping 9s for 40s. Now that many states have Shall Issue CCW laws, the idea of a compact gun is back in. And compact with power is certainly attractive.



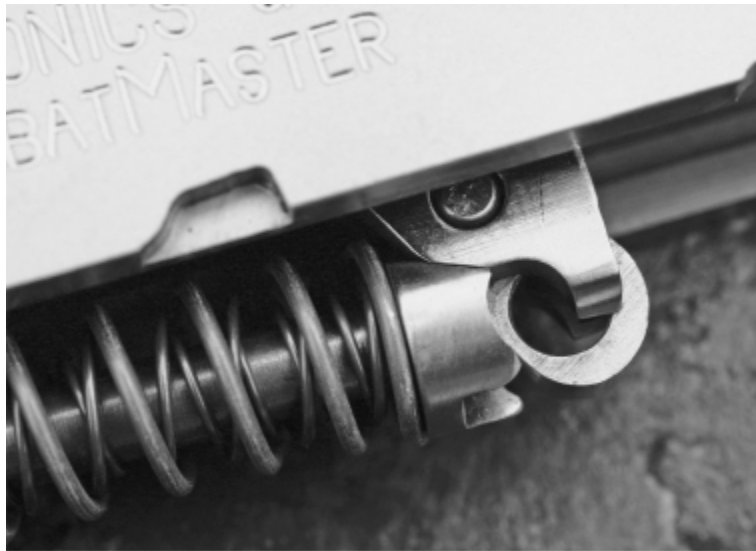
If you get the rod in wrong, you'll know. It will stick out.



Done right, the guide rod is flush.

The new Detonics is owned and operated by Jerry Ahern. Yes, Jerry Ahern the gun writer. As the head of the new Detonics USA LLC, he is in a unique position: as a gun writer he's had the chance through the last couple of decades to try just about every gun that has come down the pike. And as

the head of the new company, he had the chance to do things right. And the results?



The recoil spring guide rod locks to the lower barrel lugs. Make sure you get it right on reassembly.



The CombatMaster can use other mags, but it comes with three compact carry mags.

CombatMaster

With the same name as the old model compact, the new guns looks much the same in general features. The CombatMaster is all stainless. The slide is just over six inches total length, with the barrel a stubby 3-1/2 inches. The top is rounded, the sides a combination of ground flat and then

bead-blasted for a matte finish. On the left side is “Detonics USA” and “CombatMaster” machined into the slide. Not roll-marked, but a CNC ball end milled name and model. The result is attractive. The right side of the slide is unmarked. There are cocking serrations only at the rear. The ejection port is lowered. The rear is scalloped in such a way that you can see the end of the extractor. The rear of the barrel has a marked “pitch-up” in its lockup. Compact guns usually have such a barrel angle. They must be securely locked, with as much locking lug engagement as possible to prevent battering. They also must be pointed down to a greater degree for a proper zero. (The barrel is always pointed under the target when aiming. Recoil brings the bore on-line with the target during firing. Compact guns whip more, thus requiring more “aim-under” built into the lockup.)



You can see and feel if the mag is fully loaded.



Fully loaded, the follower sticks out below the magazine tube.

The barrel is the cone lockup that the old Detonics pioneered. There is no bushing. The sculpted cone at the muzzle allows lockup, and the pared-away portions allow the cycling parts clearance. The sculpt behind the upper part of the cone is one of the pioneering features on Detonics. It provides clearance for the slide once the barrel has tilted to unlock. Underneath you'll see a flat extending from the lower lugs to a quarter inch from the muzzle. That is for the recoil spring system. The recoil spring system is a captured affair, with the guide rod attached to the retaining cap with an allen-head screw the triple-spring recoil system tames the recoil of the light slide. Not an easy job, considering the compact space available for the system. The barrel has the standard Browning-designed ramp arrangement. The fashion in the previous decade was to put an integral ramp on everything. However, working with the relatively low pressure of the .45 ACP you don't need an integral ramp. And ramps can cause feeding problems, especially in compact guns. So Detonics chose not to re-invent the wheel and left the ramp as John Browning designed it. Well, as he designed it, improved for hollow-point bullets. The barrel ramp is nice and wide, to gobble up whatever you feed it. The frame ramp is full width of the mag opening, polished, and set back the proper distance from barrel unlock.

The frame is shortened in the mag well, which means there are some non-standard parts to consider. The frame itself is a Commander-length dustcover which nearly comes out to the end of the shortened slide. Plain on the left, the frame is rollmarked with the Detonics' name and serial number

on the right. The trigger is short, aluminum and has an overtravel stop screw. The slide stop lever is normal, the safety is similar to the Series 70 type safety of Colt. The tab is not wider than the old military safeties, but the sloe comes all the way from the root of the pivot pin area. The hammer is a simple spur, with the underside scalloped to clear your hand. To make the Combat Master as compact as possible, the tang of the grip safety has been done away with. Thus the change in the hammer. The “grip safety” is just there to fill the gap. It doesn’t do anything to block the trigger. It also does nothing to nip your hand, as if the hammer could even get that far. You may get “tracks” from the slide running over your hand, but you won’t get bitten by the hammer/grip safety combo. The mainspring housing is flat, grooved, and in this age of plastic housings, refreshingly stainless steel. The shortened frame requires shortened grips. The grips are wood, double-diamond checkered, with the Detonics name and logo cut or burned into a center circle in the grips.

The magazines (the Combat Master came with three) are special short Metalform, proportioned for the frame. The magazine well of the Combat Master is beveled, and nicely so. Many makers consider a taper cut into each side of the mag well as a taper job “good enough.” The Detonics funneling is done on all four faces of the mag well. Reloading is easy. The Metalform magazines carry on a Detonics’ first, also: the follower protrudes from the bottom of the magazine tube when the magazine is fully loaded. No need to count. If the tab is out, the mag is full. Of course, much has changed since the time the Combat Master was developed. Speed reloads being one of them. You do not want to be slamming a loaded magazine into the Detonics, not with the tab sticking out. Without it, you’d lose a round’s capacity in the mag. With it, reloads are best done carefully. Installing some kind of magazine bumper on the baseplate makes the CombatMaster bigger and more difficult to conceal. Me, I’d put a bumper on and not worry about the extra size.



The CombatMaster comes with a test-fire target. And it shot as well for me, too.

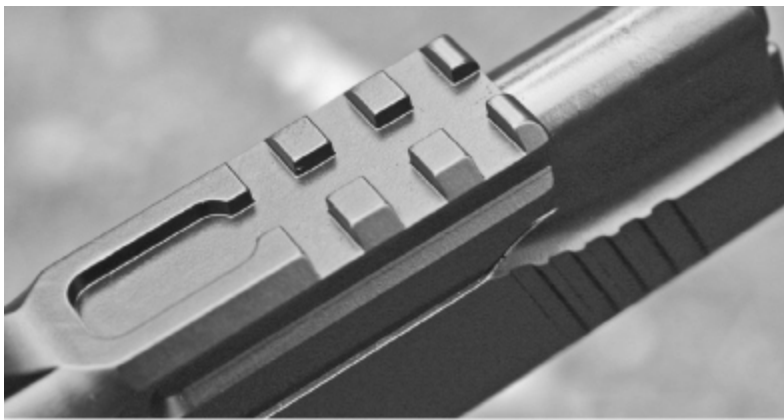
You'd expect the recoil on such a small gun to be quite bad. It wasn't, probably due to the weight. As an all-steel gun the CombatMaster isn't going to push you around like an alloy one would. I found the recoil to be no big thing. While I certainly knew I was shooting a smaller gun, I didn't have the "What am I doing?" feeling each time I pulled the trigger. Not like the dread I've felt dropping the hammer on lightweight .357 and .44 Magnums.

As for accuracy, the CombatMaster is quite good. I've got Ransom rest inserts for a host of 1911 pistols, but not this one. I had to shoot off of a rest, which is quite the challenge with a handgun so compact. For a compact carry gun, it is plenty accurate enough. Three-inch groups were attainable, and four was the expected norm. The big sights and the crisp trigger helped. In all the testing, the CombatMaster never failed. It ate all I gave it, and worked like a charm.

The silk suits and t-shirts of *Miami Vice* are not going to make a comeback anytime soon. But the Detonics CombatMaster is a retro carry gun you should look into.

Kimber Warrior

Back in the 1980s, when the Beretta M-92 was being adopted as the M-9 for general issue in the Armed Forces, the Marine Corps wanted nothing to do with it. However, they were not allowed to ignore the change, and had to accept the M-9. The special units of the Corp, specifically the MEU-SOC (Marine Expeditionary Force, Special Operations Capable) managed to hang onto the 1911. Basically, they told the powers that be their job was different, they needed a different tool, and the 1911 was the only one capable of doing the job. Colonel Robert Young (since retired, became Operations Manager of Gunsite, then retired again) laid down the specifications of what the MEU-SOC 1911 was to be: 1911A1 Government, 5-inch with fitted and reliable barrel, standard recoil spring plug (full length guide rods were just starting to become popular) hi-viz fixed sights, standard trigger of not more than 4.5 pounds, beavertail grip safety, lanyard loop and reliable magazines.



If you expect to go into dark places looking for bad guys, a light rail on your sidearm is a good thing to have.

The epitome of what a reliable 1980s-era IPSC pistol was, except for the competitive things like .38 Super and compensators.

The Corps built those guns, and made sure they had enough frames on hand to keep building them. As each gun wore out it was rebuilt again and

again. As the original frames and slide were soft-steel WWII-era guns, the slides probably didn't last too long. The new slides came from whoever had the winning bid when the Corps needed another couple of dozen or 100 slides.



The Corps is hard on guns. Probably even harder than my mud and dust tests.

Fast-forward to the 21st century. The guns are getting very tired, and we have a whole lot more people that need shooting. Combine that with the Corps doing a lot more live-fire training, and it's time for new guns. What new things are specified? After all, we've learned a whole lot in the 15 to 20 years since the original guns, right? Actually not much changed, but some of it got written down as specifications. The interim CQB pistols were to have cocking serrations front and rear. There had to be a rail for a light. The sights were to be hi-visibility (which today really means Novak) and zeroed at 25 meters with 230 hardball. There came an accuracy requirement of 4 inches or less of seven rounds of hardball, details like flat mainspring housing with lanyard loop, ambi safeties, beavertail grip safety and a trigger pull of 5 pounds.

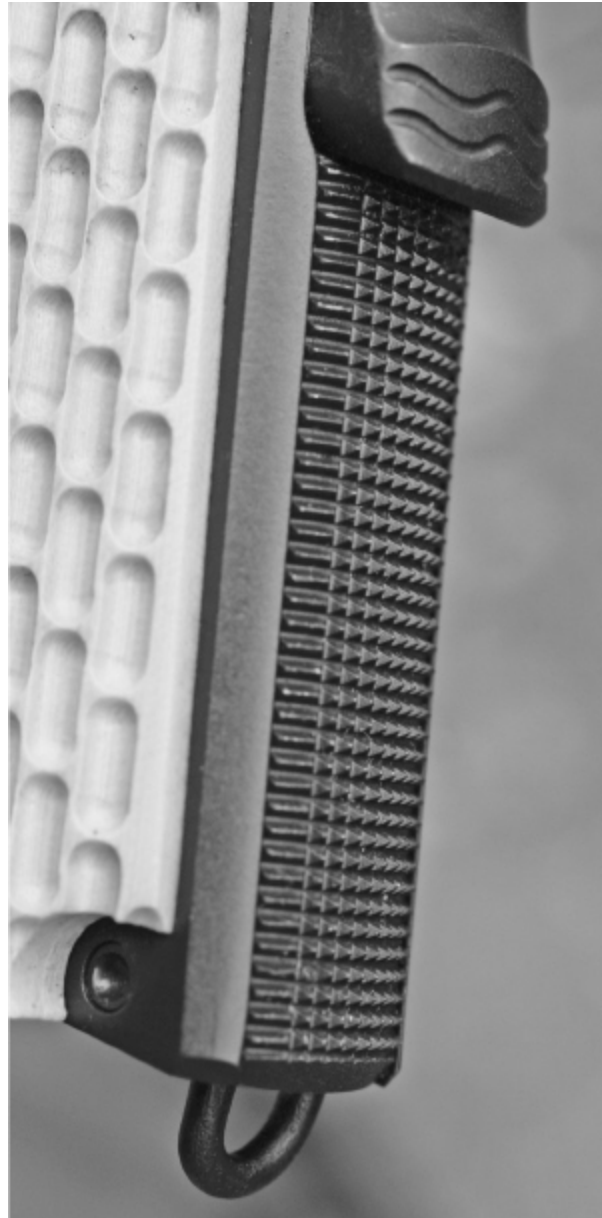
The first order of guns (and maybe the only, when they made it) was to go to “Detachment 1” of the new Marine Corps Special Operations Command. Why the difference? There had been a disagreement for a long time about training and organization of the Special Operations units, and the Marines had held onto their own unit for a long time. The differences were ironed out, and the Corps would have a SOCOM unit (Detachment 1) along with MEU-SOC. (The difference was basically who was in charge, and the Corps didn’t want to make the MEU-SOC units SOCOM units and then have them yanked away and leave the Corps empty-handed.) The new guns were to be marked as Marine Corps property, and the serial numbers were to start with Det1.

While the Corps was deciding on this gun, Kimber had sold a bunch of 1911s to LAPD SWAT. Like the Corps, LAPD had been rebuilding guns for years, Except their had come from the evidence room, confiscated and when finally done as evidence, seized by LAPD for use. Detachment 1 could not wait for the soon-to-be Kimber with the integral picatinny light rail, so Kimber provided them with guns using the excellent Dawson bolt-on light rail, Novak sights, beavertail grip safety and Uncle Mikes grip. The Corps promptly rebuilt them with Ed Brown beavertail safeties, Simonich grips. Surefire provided their Integrated Military Pistol Light to go on the Dawson rails.

The 200 guns went to the Corps, with none left for the rest of us. Kimber, when they finally (and soon after) unveiled their integral-rail gun, made a model closely following the Marine Corps gun. However, as some of the details were contractual requirements, the new Kimber Warrior could not be marked as government property, not have the “DET1” prefix in the serial number. No problem.



A lanyard loop is not just a good thing, sometimes it is necessary to keep from losing valuable gear.



The Corps feels a flat mainspring housing is best. Didn't we go to arched in 1927, and why are we going back? (Just thought I'd ask.)

Kimber Warrior

The Warrior comes in a hard, lockable plastic case. On the outside is a sticker, "No shell case enclosed for MD & NY." I don't know if it is simply a means of keeping inventory straight, or a slam at the irrational, useless and expensive program those two states have (and which Maryland is considering dropping) to build a database of fired shell casings. Take it as a

warning for those of you who live in other states; pay attention to what your legislators are doing. They work for you, and if you don't like the work they're doing, say so. And vote them out if needed. (End of soapbox.)

Inside is the Warrior, in its VPI bag, three magazines, lock, instruction manual, bushing wrench and a small tube of oil. Mine also came with a brochure for Kimber sport lights, a special offer for rosewood grips, \$10 off an NRA membership and a brochure for Meprolight night sights. As the Warrior comes with night sights, I guess the Meprolight brochure is standard in every Kimber box that leaves the factory.

The Warrior itself is a Government-sized 1911A1 with all the bells and whistles.

The sights are Novak, with Meprolight inserts for a three-dot night sight setup. The front sight base is slightly contoured to follow the slide radius. The rear sight has the side-panel grasping grooves we see also on the Les Baer gun. A patented feature, it gives additional grasping surface so you are less likely to miss on working the slide. The slide had grasping grooves front and rear, slanted and in the beveled-bottom wide groove Kimber style. On the left side the slide is marked with the script Kimber name, and on the right it has "Warrior" in block letters. The ejection port has been lowered and scalloped. The barrel is a Kimber, with a vestigial loaded chamber indicator slot. You'd need a Surefire light to see if there was a round, looking through the slot, but I'm sure the slot satisfies some idiotic requirement in some jurisdiction about loaded chamber indicators. The barrel has a standard ramp and standard bushing with the recoil system the one John Moses Browning designed; no full-length guide rod, no reverse plunger tube. The extractor on the Warrior is original, internal, and not the new external design. The Warrior is also not a Series II gun, as it does not have the grip-safety-activated firing pin block. If you must have one, then the Warrior isn't for you. If you don't like them, then this is where to look.

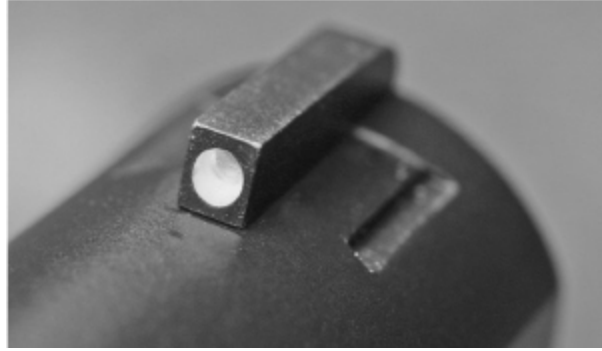


Kimber sends their 1911s out with all the goodies.

Underneath the recoil spring assembly, the dust cover has an integral light rail. The Kimber rail projects forward a bit of the standard stopping point of dust covers, but it does not come anywhere near being a full-length dust cover. The dust cover has been thickened forward of the slide stop lever. The slide stop lever is a standard one that has been slightly altered: the underside of the thumb tab has been machined concave so you can get a better purchase when locking the slide open. The thumb safety is a low-profile ambidextrous unit, and I have no problems with the offside paddle hitting my first knuckle. The grip safety is the standard Kimber design, with a speed bump on the bottom. It is tuned to release the trigger just short of halfway through its travel. The hammer is Kimber, and the trigger a lightened three-hole aluminum one with overtravel screw in place. Out of the box the trigger pull was a clean five pounds, which got better with use, dry-firing and the mud and dust tests. The Kimber name and city are marked on the right side of the frame along with the serial number, your basic "K" prefix Kimber consecutive number. No special markings, as the

government reserves those themselves. I mention it only because one person I talked to (not one of my testers) had the opinion that since it wasn't marked exactly as the government guns were, it was somehow sub-standard and not worth owning. One of these days I'm going to lose it, and start slapping people with such silly ideas.

The triggerguard and frontstrap joint has been slightly lifted, the frontstrap is smooth. I've seen some custom Warriors already with the frontstrap checkered or stippled. The end result is a very attractive gun, as if the Warrior wasn't already. The mainspring housing is flat, serrated and has an original-style lanyard loop on the bottom. The magazine well has been funneled with three non-joined bevels. Each side and the rear of the funnel have been machine-beveled, but the cuts were not blended together. The effect of leaving the corners un-beveled is only cosmetic, as there is not anything for a magazine to get hung up on. The provided magazines are blued, with hard plastic baseplates already attached. The baseplates are the standard J&J units, a design that has been around almost from Day One of IPSC shooting. They are held on with two screws. I yanked one off (well, I unscrewed it, I'm not into destructive testing) to find that Kimber is getting its magazines from Metalform. The tubes are sheet metal, welded up the spine, with a bevel meeting of the lips to the spine. Back when these were the standard design, we found that a few years of hard use would have them cracking at the corner of the rear opening. If metallurgy of magazines has improved since the 1970s, you can expect more use than that out of them. If not, in a few years of twice-weekly practice you'll be looking for new mags. No big deal, really, as by that time you'll probably have lost one or two of these, bought more, and swapped the springs out once or twice. If you do not practice or shoot in matches twice a week, count on a good ten years or more of use from them.



White dot front sight, a Novak front blade.



Ambi safety and Novak rear with white dots.



The grip safety has a speed bump. The edges of everything are melted so you won't be attacked by your own sidearm.



The frontstrap/trigger guard joint is lifted slightly.



I'm not all that hot on the mags, but they worked through the tested (mud & dust, too) and if they do ever break are easily replaced.

The grips are hard synthetic, with oval grasping slots cut into them (or more likely machined into the surface of the mould the grips came from.) The grips come from Kimber, and the color is kind of tannish-green. Or greenish-tan. They work.

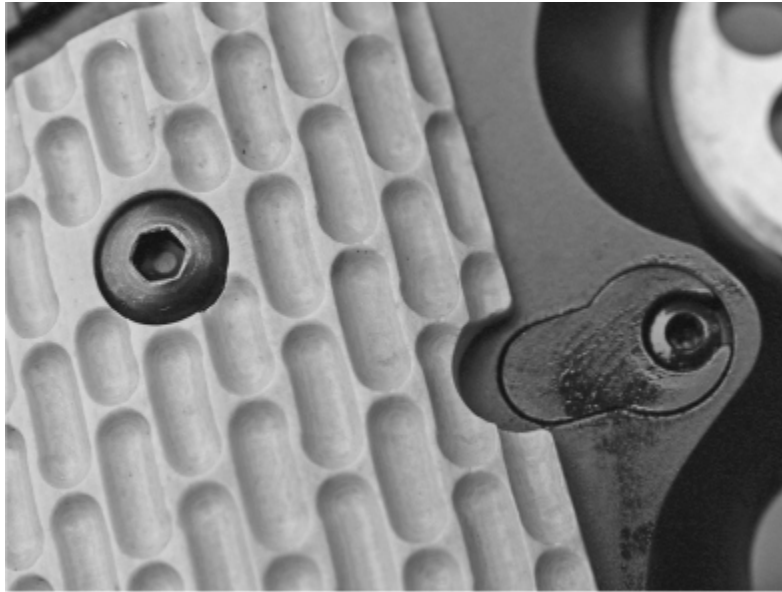
The finish is the new Kimber polymer/synthetic baked-on finish that is tougher than a two-dollar steak barbecued by your brother-in-law. After all the mud and dust testing I subjected the Warrior to in Chapter Four, the finish hardly shows any signs at all.

How does it shoot? As you'd expect. Between the mud and dust tests, and the standard shooting, my testers and I ended up putting close to 2,000 rounds through this Warrior. None of us had a failure of any kind. From the bench it was no big deal to shoot better than the Marine Corps required 4 inches at 25 yards. In the Ransom rest, the Warrior proved once again what a great load Bill Wilson discovered in the Oregon Trails 200 lead semi wadcutter and Vihtavuorii N-310. Clusters of an inch in size were common, and the aggregate average with that load was just under 1-1/2 inches. It shot almost as well with Hornady XTP, and Black Hills hardball was right on the heels of the XTP.

As I mentioned in Chapter Four, I called Dwight Van Brunt of Kimber and got permission to abuse his sample gun with the mud and dust tests. The results were a muddy tester, a pile of brass, a gun hardly stressed at all, and renewed and increased respect for the design genius of John Moses Browning. I have to admit, the first time I shoved the Warrior down into the mud, I really expected the finish to suffer. And if not from the first, then certainly by the end. Nope.



The mag well is beveled, but not made a huge competition funnel.



The grips are cool, non-slip, and shrug off all known solvents, including New Jersey tapwater.

The original Detachment 1 guns have been issued, and that unit rotated into and out of Iraq. The Corps needs more guns, and the new ones will not last forever. With older ones wearing out, there will be a new purchased of guns for sure. Whether the Corps waits on the planned program to select a possible new service sidearm, or buys new Warrior-type guns to be sure of having the 1911 option (in case the new sidearm is as bad as the M-9 ended up being) we can't know. But you can get yours now. I'd suggest getting one right away.



Yes, there is an expensive, good-looking, 1911 that I don't own down there in the gritty mud. It worked fine through all I could throw at it.

Les Baer

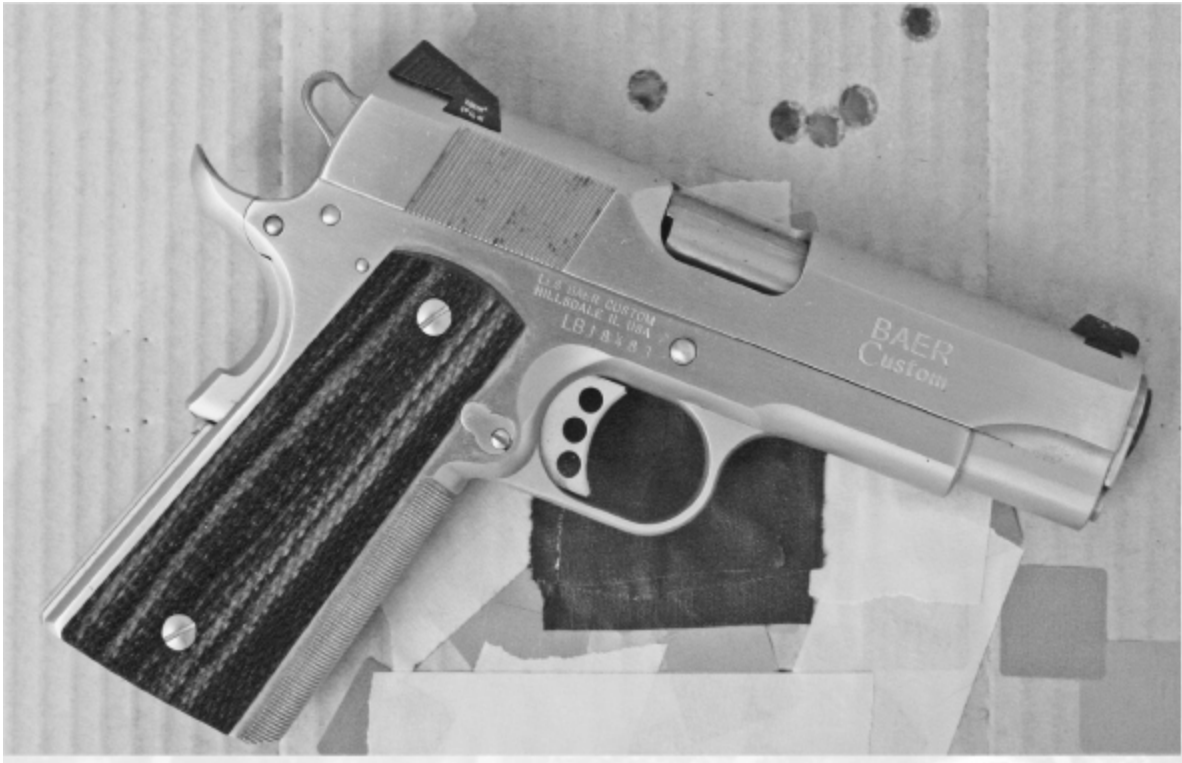
As one of the older names in custom gun-smithing, Les Baer has been at this for quite some time. Long enough to have settled on some ideas both in the 1911 arena and the AR as well. What he has decided on is quality and custom-made guns. You won't find a warehouse full of standard guns at Les Baer. You'll find guns being built as the customers order them; in the details the customers want. What Les hasn't done is go down the hi-cap Open gun route. You want a Les Baer 1911, you can order from a number of packages, with calibers, finishes and sights as options. But you'll be getting an iron-sighted single-stack pistol.

In the last book we tested a Heavyweight Monolith, which I almost ended up keeping. Were the old Second Chance bowling pin shoots still going, that gun would have stayed with me and been to the firing line a number of times since then, and I'm sure it would have won me much loot. If I hadn't already had a shelf full of 1911s, I would have had to tell Les "I want it, how much should I make the check out for?" With the new USPSA Single Stack Division, I may regret having let that gun slide by. The new one poses a different dilemma. If I keep this one, I'll have to take up IDPA competition full time. That means I'll have to buy a complete 5.11 wardrobe, right down to the tactical wristwatch, wedding ring, underwear and sunglasses. It's a heavy burden, but someone has to make the sacrifice.

Les sent me a Custom Carry Commander in .38 Super. The gun comes in a cardboard box with three magazines, bushing wrench, Les Baer patch and certificate signed by those who worked on it.

On top, we have a standard length commander slide without forward cocking serrations. The right side is marked "Baser Custom" and the left is marked "38 Super." The sights are Novak by Trijicon, with tritium inserts for better night viewing. The rear sight is interesting: the sides have additional cocking serrations. They are very interesting, cool and useful. And patented. The cocking serrations are angled and finely milled. The barrel is a Baer match .38 Super, ramped and using a standard bushing up front. The recoil spring system is standard, no guide rods here. When I first

pulled it out of the box, the barrel fit was of the “last pop” fit, quite tight but willing to go home with just a little snap of the wrist when I left it hanging. Once I’d shot it a bit, the hesitation went away, and the slide would snick home without hesitation.

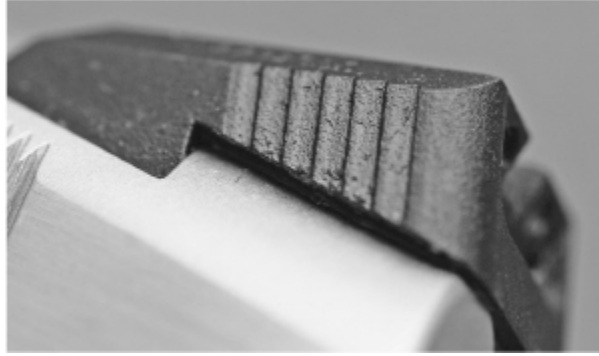


If I had lain off the coffee this morning, I’d have had a real bragging group. Don’t blame the gun for those two strays, nor Les. They’re my fault.



The .38 Super Les sent is a perfect carry gun, or an IDPA ESP pistol.

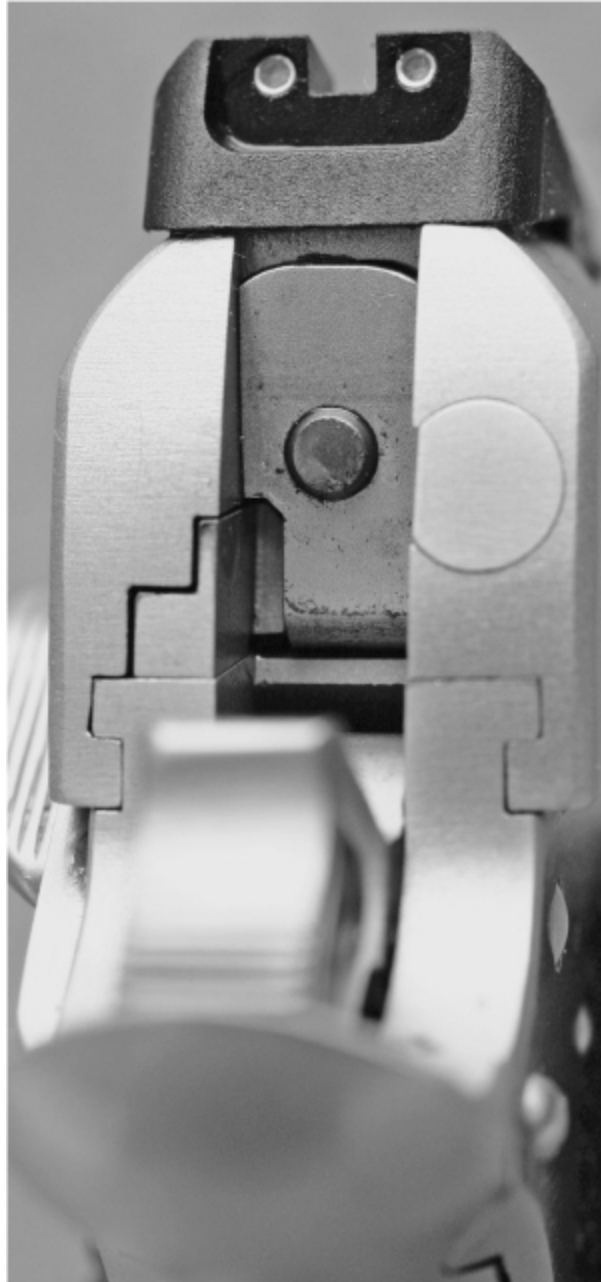
The ejection port is lowered, flared and relieved for live ejection. Getting live ammo out was never a problem. The frame is standard (except for the ramped barrel) and lacks a light rail, a refreshing situation. The frame is marked on the right with the shop name and city, and the serial number. On the left the slide stop is a standard unit, the thumb safety is a Swensen-looking single side (not ambi) and the nicely fitted grip safety looks a lot like a Wilson, but is a Les Baer part. Les makes a lot of the parts that go into his guns, and this grip safety is one of them, complete with speed bump. The grip safety is fitted to move smoothly without side-to-side wobble, and is sensitized. That is, it releases its lock on the trigger's travel once it has pivoted less than half its travel. You don't have to have the Les Baser in a death grip to be sure the trigger will work as advertised.



The rear sights are modified and offer additional traction. They look good, too.



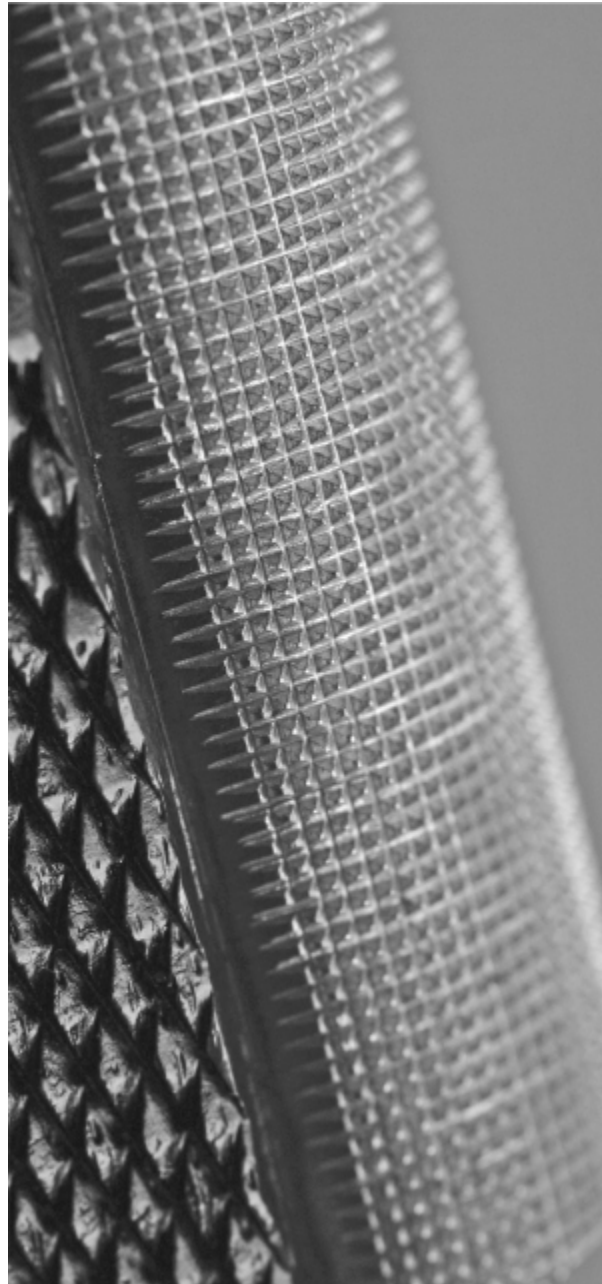
Lifted frontstrap, three-hole target trigger, all parts perfectly fitted. Yup, it's a Les Baer all right.



No ambi safety, three-dot night sights, and a perfect slide to frame fit.

The trigger is long, aluminum has an over-travel stop, and resets vigorously. The overtravel is set so it has plenty of travel but doesn't feel like it. While I can see the trigger move when I dry fire, if I'm looking at the sights (instead of the trigger) it sure feels like the trigger hasn't moved as the hammer falls. For the strength of the reset, the trigger pull at four pounds is very nice. When dry-firing, when I go to reset, the trigger

practically pushes my finger forward. The mag catch is serrated, normal length and is utterly normal. The frontstrap has been “lifted” and contoured under the trigger guard, to allow your hand a higher grip. The frontstrap is checkered, at 30 lines to the inch. The mainspring housing is flat and grooved. The magazine well is nicely contoured on all four faces. The grips are fully checkered, flat to the bottom of the frame, and nicely figured.



The checkering is hand-cut, and very well done. Those used to the bland perfection of machine-cut checkering may not like it. I do

The Custom Carry has been gently dehorned. Nothing on it has been so fiercely attacked with a file or sander that you think you're looking at a bar of soap facsimile of a 1911. But you can't get anything to bite you except the checkering. If there is a flaw on the Custom Carry, it is the checkering of the frontstrap. The checkering is well cut, even and straight, but the ends of the lines on the sides of the frame tail off unevenly. Some are longer than others. Nit-picky as always, my test crew divided themselves into the usual two camps, the "glass half empty" and the "glass half full" sides. The glass half empty group felt that for what they'd be paying for a gun like this, they'd expect the checkering to be perfect. The glass half full side felt that a little unevenness in the ends of the lines simply proved that the checkering was done by hand. That the whole gun was done by hand, and if you had a problem with it you could certainly expect that the particular person who built it could explain how the problem happened.



Wonderfully accurate, and too pretty to abuse with the mud and dust tests. So I just shot a few thousand rounds through it in one weekend.

Me, I'm a glass half full kind of guy, and the Custom Carry did not let me down. It fed everything I had to feed it without flaw save for one particular load. I have a practice load for my wife, a lead 125-grain bullet going about 950 fps. When I fed the Custom Carry that ammo, and I deliberately limp-wristed it, the gun would not lock open on the last shot. You really can't fault a gun for that, can you. I mean, underpowered ammo, and a weak hold, after an afternoon of shooting when the gun is good and dirty? Get real, and stop complaining.



Standard recoil spring setup, no full-length guide rod here.



The standard recoil spring system means the Les Baer is kosher for many kinds of competition. And suitable for carry, as you can do one-handed malfunction clearances with it.



A Les Baer barrel, fitted to a Les Baer gun by Les Baer. Of course we expect accuracy, and of course we get it.

The magazines are interesting. Blued. Blue magazines, shipped with a stainless/chrome gun? Whatever works. And these work. They're made by Metalform for Les, and look very much like the old Colt magazines of yore,

the ones we could never depend on. Unlike the tinny old Colts, these appear quite durable. I did not subject the Custom Carry or the magazines to the mud and dust tests of Chapter Four. The gun is too pretty, and isn't built with that kind of environment in mind. But I wasn't able to get them to fail (except for the non-lockback) in all the shooting my testers and I did.

Accuracy was outstanding. I was able to easily shoot groups down to an inch at 25 yards from the Ransom rest. The clubs hundred-yard gong was not safe anytime the Custom Carry was in use. Holdover? What holdover? I simply put the sights in the middle of the plate, and when I correctly pressed the trigger, the gong would clink a short time later. The softer recoil of an all-steel gun and anything but +P ammo made shooting fun. Even the +P ammo wasn't obnoxious. Then again, I've spent a lot of time on the range shooting bowling pins, where a power factor of 195 was considered a good starting point. A 125 JHP at 1350 is only pushing 168 PF. Snappy, but not objectionable.

The question is what do you use a pistol like this for? You mean besides concealed carry? Feed this a diet of Cor-bon 125 JHP ammo, and you've got a compact sledgehammer that holds 10 or 11 shots to start with and nine or 10 more at the reload. (Chip McCormick makes ten-shot .38 Super magazines that will fit.) Yes, an all-steel gun might be a bit heavy to pack, but with the right holster and belt you can get used to it. (You can always have Les build you one with an Aluminum frame, for less weight.) An all-steel gun makes practice a whole lot easier, especially when you use some of your actual carry ammo to make sure it works. The Custom Carry would also make a kick-butt competition gun. In USPSA/IPSC you'd be a bit limited. You could not shoot it in Production. You wouldn't have much fun shooting it in Open or Limited, not against guns with comps and dots, or hi-cap 40s. But in Limited 10, provided you understand you're shooting Minor, it would be great. Especially if it was your carry gun. You'd be shooting your real-life gear in a match, getting the kind of practice you really need. Your scores would suffer some, but not a whole lot. Just remember, you have to shoot many, many A hits when shooting Minor. Even better would be to use it in the new USPSA Single Stack Division. There you'd be going head-to-head with other 1911 shooters, and only limited in scoring by shooting Minor.

Where the Custom Carry would really shine is in IDPA, where it would be an exemplary ESP gun. As in Enhanced Service Pistol. There, everyone shooting ESP is “stuck” with Minor loads. Everyone is shooting the great big A zone, and trying to avoid time-added penalties. The Custom Carry would fit right in.

Some might worry that the shorter slide, and thus shorter sight radius, might be a handicap. Let’s do the math. Assume for the moment that an error in sight alignment of .001” is too small for you to see. (Actually, many shooters can’t see an error much larger than that.) The Custom Carry has a sight radius of 5-3/4” A government model has a sight radius of 6-1/2” inches. A .001” error in sight alignment ends up as an error of .313” for the Custom Carry. For the government model, the same aiming error means the impact is off by .276” That means you’re giving up a grand total of .037” of aiming error at fifty yards. Can you see .037” at fifty yards? I can’t. Not even when my optometrist has me dialed in to 20/10 vision. Considering the size of the A zone in either USPSA or IDPA competition, .037” at fifty yards is utterly inconsequential.



The mag well is slightly, but nicely, beveled. No gonzo competition funnels here.



The frontstrap is lifted, so you can get a high grip on the frame. Not that you need it for the recoil of the .38 Super.

So what will I do with this gun? Probably send it back, reluctantly and after much foot-dragging, only to regret it later. I have a safe full of personal 1911s, but few have this much character, accuracy and looks. I suppose I really should get out and do more IDPA shooting, to justify sending Les a check for this one, for on this gun Les has won. Les, how much do I make the check out for?

Nighthawk Custom

Nighthawk Custom is a new shop, a band of gunsmiths with decades of experience who decided to set up shop in Berryville to make high-end custom 1911s. They know what they're doing, and the guns show it. The one they sent me was their Predator model, a compact carry gun that has all the custom features you'd expect on a bigger gun.

The Predator III-T arrived in a soft gun case made by Bulldog. There has been a change in gun cases while I wasn't looking. (Admittedly I don't spend a lot of time keeping a close watch on trends in gun cases.) Where we had simple zippered pouches before, today we have multi-pocketed carrying systems with dedicated slots for gear. The case has the Nighthawk logo and name on it. The outside pocket looks big enough for extras like cleaning gear, a match booklet, even a paperback novel for the wait between stages in a match. What was in this case was the fired empty, obviously for you poor sods who live in a medieval jurisdiction that requires a sample case. (If mafia hit men ever have enough taste and brains to select a superior pistol like this, we aren't going to catch them simply because we have a fired-case database.)

Inside, the case has eight pouches for magazines, and two side slots for whatever you might need or want to stash. The Predator came with two magazines and paperwork. One piece of paper was the invoice. The Predator is spendy, but not out of line with the top-end work from other custom houses. The invoice was the typical gun writer's paperwork, laying out cost and features, with a gentle reminder it is on loan for the book. (I've got no problem with making things clear.) There was a reprint of the ATF handout of the Youth Handgun Safety Act. Nighthawk includes an owner's manual, with all the usual boilerplate admonitions against pointing it at yourself, and to only use good ammunition. In the back is an excellent photograph of the Predator and its parts laid out so you can see them, complete with numbers in the photo and the list of part names. There was also a form to order six new Nighthawk magazines for \$99.95. At \$16.95 each, that is an excellent price, and you should take advantage of it.



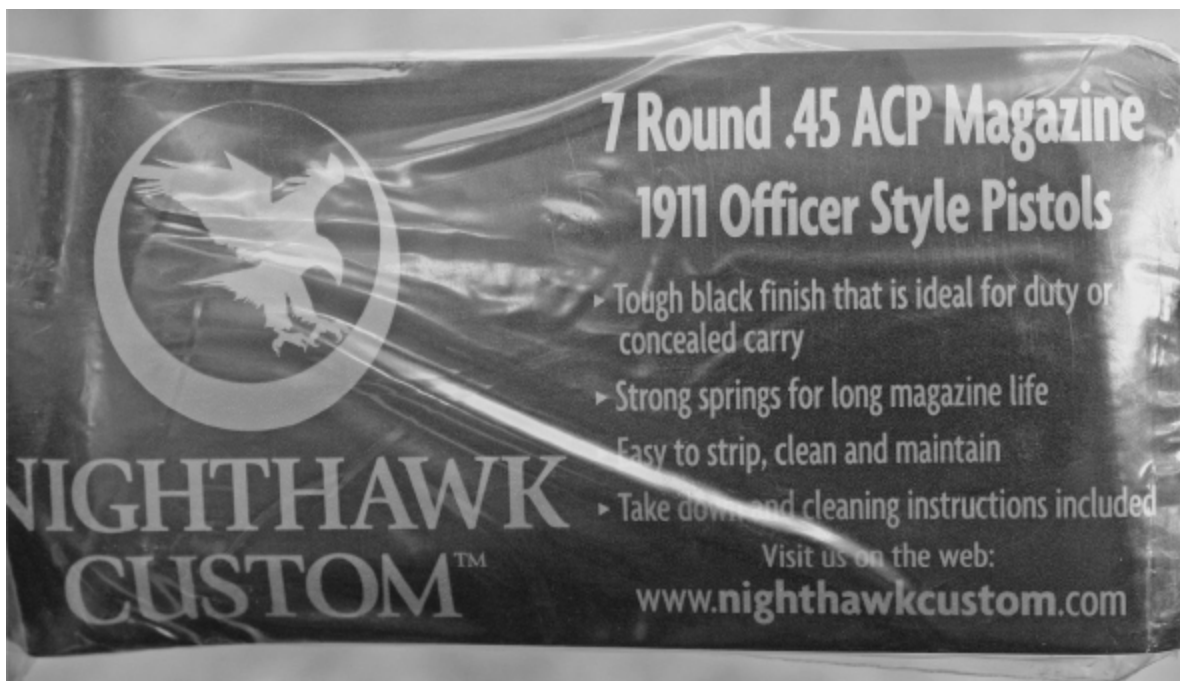
You could spend more on a case, but why? You get a really good one with your Nighthawk.



The obligatory warning sheet is cable-tied to the Nighthawk. Probably to keep gun shop owners from going crazy, showing off the really good-looking Nighthawk.



Gun, case, magazines and paperwork.



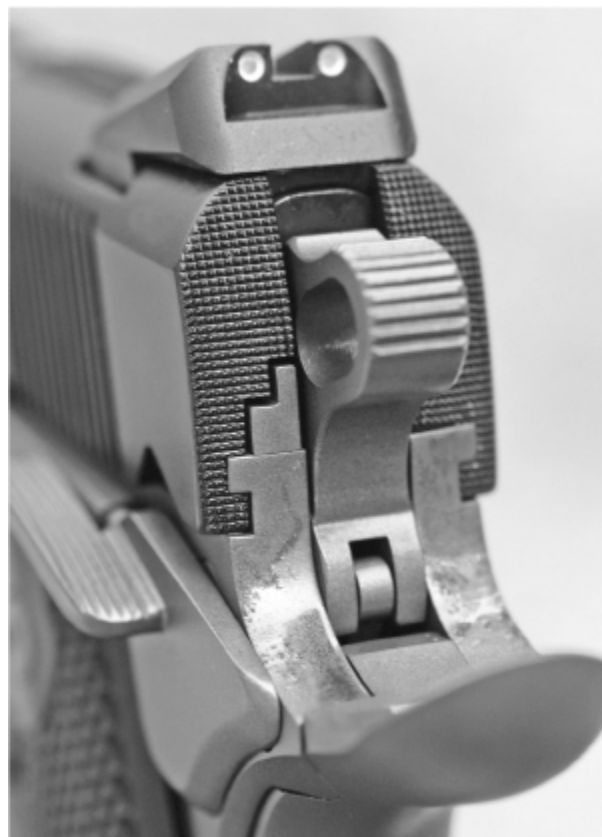
The magazines with the Nighthawk are good ones.

The best part was the included test-fire target. This gun was built by Ron Phillips and Rodney Sharp. I don't know who did the test-firing, but over sandbags, at 15 yards the shots are in a cloverleaf. I can make out the

arcs of five shots, and the two widest holes are still touching each other. Not surprisingly, the group was fired with Black Hills 200-grain SWC ammo. The 200-grain lead semi-wadcutter in .45 (long nose, H&G #68 style) has a stellar record for accuracy. This Predator III-T does nothing to diminish that record.

The “T” in the III-T is for the titanium-color steel frame. The Predator is a semi-compact carry gun. When carrying a pistol concealed the difficult part to conceal is not the slide but the frame. (A too-long slide makes it uncomfortable, but still concealable.) The Predator has a commander-length slide, with an Officer’s-sized frame. Thus the magazine capacity is cut by a round. The typical result is to make it a 6+1 pistol, but the advances in magazine design get us a round back. So the Predator is a 7+1. You can still use Government-length or longer magazines if you wish.

The Predator as shipped has a cable tie holding a warning tag onto it. I wonder if the warning tag is not so much for the places where you have to jump through hoops to own a gun, as it is to keep gun shops from going crazy with customers asking to handle it. It’s that good looking.



All the right gear, Novak sights, thumb and grip safeties built for speed, fitted precisely.



The barrel is coned, with a blast shield up front.



Novak three-dot night sights. Cool.

On top is a set of Novak night sights. Three-dot, with Trijicon inserts. The top of the slide is rounded, with eight lengthwise grooves milled into the top center. They go from the front of the rear to the rear of the front sight. The right side of the slide is marked Predator III, and the left marked

with Nighthawk Custom and the Nighthawk logo. The ejection port is lowered slightly and flared. The cocking serrations are square-grooved and only on the rear. The barrel is a Nighthawk match, in .45, and fitted with a cone and blast shield lockup. The crown is deeply recessed. The recoil spring retainer is a reverse plug, and the Predator has a full-length guide rod.

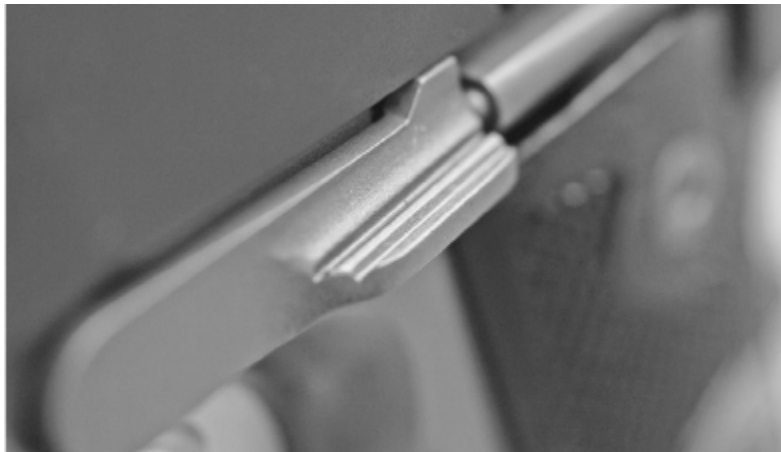
The slide stop is the new style I've been seeing; a horizontal shelf coming out of the bar of the slide stop, instead of the angled and serrated surface. I'm getting to like it. The thumb safety is not ambi, is low-profile and is dehorned. It positively clicks up and down. The trigger is a long aluminum with an over-travel stop unit, with a variation on the usual three circular holes to lighten it. The trigger pull is clean and crisp, and about four and a half pounds, a good weight for a carry gun. The overtravel is set to give good clearance without being a problem for accuracy. The grip safety is a hi-ride with speed bump, and tuned to release the trigger at just under half its travel. I haven't had a problem with a non-releasing grip safety while shooting or dry-firing the Predator.

The grips are Alumagrips. With the Nighthawk logo against a full moon in the center boss. The magazine well has an expertly blended magazine funnel. It appears to be a Wilson funnel, at least in its attachment to the mainspring housing. But once Nighthawk is done, it is blended to the frame, which itself is beveled to ease reloading. The funnel and frame are so heavily beveled that the corner of the mainspring housing peeks in the gap between frame and funnel. But it does not catch on anything. The finish is a matte black on the slide and a matte dark gray on the frame, funnel and frame parts.

The Nighthawk magazines are blue and seven rounds in capacity. They come with a baseplate on them. Even if they weren't so marked, it would be easy to see that they were made in Italy by Act-Mag. Which is just fine. In the early days of IPSC we'd avoid "Made in Italy" magazines. In the mid 1980s we started to see some 11-round extended magazines that were reliable. Bowling pin shooters used them when building a nine-pin .45. The magazine made today are not like the tinny mags of yesteryear. Made of proper alloys and heat-treated, you can depend on them. The baseplate

sticks just enough past the mag funnel that you are assured of a proper reload, but not so far that it could cause a problem in concealed carry.

In test-firing it, the controllability of an all-steel compact gun is apparent. The cone-barrel lockup makes the recoil softer (a very small amount, and you have to have identical guns to feel it) but also quite accurate. The Predator went through its assigned share of ammo without a problem, not a surprise in this day and age. I can't say it showed a preference for any particular type of ammo, as it shot them all well enough that the differences between loads was not larger than the variance in groups within a load. I first discovered such a phenomenon back then working with my brand-new Ransom rest. The group of us were testing our various guns, and found that we could expect some guns to shoot (as an example back then) groups from two to three inches in diameter. And if we changed loads, the guns would shoot groups from 2 to 3 inches in diameter. That one load shot an average of 2.25 inches and another shot an average of 2.75 inches was immaterial. Shoot enough groups and the averages would shift, even change places. And so it is with this Predator. All groups with all ammo shot under 2 inches. One day, the Black Hills blue would shoot an average of 1.25 inches, then the next it would be 1.75 inches. And the Hornady XTP would shoot back and forth between 1 inch and 1.25 inches. Yes, you could say that statistically the Hornady shot better than the Black Hills, but on a good Black Hills day and a bad Hornady day they'd shoot the same. Such is the nature of statistics. If you were to shoot all the ammunition available of both types, you could come to a conclusion. But as soon as you ran out of each production lot, you'd be back to square one.



I like the slide stop lever. Not your usual “1911 since 1911” style, and it works.



Alumagrips, and a lifted frontstrap. Good combo.



A competition mag funnel, on a carry gun? Why not? And when properly fitted (as this one is) fast, effective and unobtrusive.



The Nighthawk checkering is superb.

Suffice to say, this is one accurate gun. Accurate enough it can hold its own against government models with longer barrels and sight radiuses.

Nighthawk makes custom packages, but within a package you can specify details. If you can pack the extra weight of an all-steel compact, you will not be disappointed by the performance of a Predator. You can spend more and get less. You can even spend less and get almost nothing, compared to what you get here. Even if you don't go right out and buy one right now, keep an eye on these guys. They're going places.



A full-length guide rod and a standard-ramp barrel, and 100 percent reliability.



If you had any doubts it shoots as well as it looks, this target (my first check of zero) should dispel all doubts.



An aluminum trigger, standard mag button, all fitted and perfectly finished.

Olympic

Olympic is better known in many circles for making AR-15 rifles, than for its 1911 pistols. However, unbeknownst to many, Olympic actually makes pistols. That is, they do not simply order parts from various subcontractors and assemble from the shipped bins of parts. They machine their own slides, frames, barrels and other smaller parts.

Those with a history will look at some of the Olympic offerings and remark “that looks familiar.” They should. Olympic bought the old Safari Arms, Randall Arms, and others, and many of the parts still have the look of the old Safari Arms, but with much better quality. One feature of the Safari Arms pistols that I could never warm up to was the finger hook. The finger hook on the frontstrap was a fashion thing that went in and out of fashion a couple of times in the 1970s and 1980s. Some gunsmiths even made a living welding them onto pistols that didn’t come that way. Me, I never found a finger hook that was in the correct location for my fingers. However, the Safari Arms grip safety was one of the first, if not the first high-ride speed grip safeties. For a time it was the most common, and most-desired, grip safety on high-zoot custom guns. And many shooters still like the feel. I have one on my main bowling pin gun, which was built before Ronald Reagan became President, and I still like the feel.



The Olympic Arms 1911s have come a long way since the old Safari Arms. In the early days they were guns you had to work on. Now they're guns that are fun to work on even though they don't need it.

But enough of history, what of the Olympic guns? Well, you can have the old fingerhook, or not, your choice. You can have stainless or carbon steel. You can have full-size, Commander or Officers. You can even have a long-slide. You can have a whole lot of things. What you can't have is something other than a .45 ACP. Olympic offers barrels for the 1911 (and good ones, too) in other calibers: 9mm, 10mm, 40, .38 Super, .357 Sig, but their slides only comes with a .45 ACP breechface. The other-caliber barrels will have to be used as replacements or upgrades in other pistols.

The Matchmaster series is the finger-hook line. You can get them full-size or compact, stainless or two-tone. The less "Miami Vice" looking series is the Westerner line. And that is what Olympic sent me.



The sides of the front sight are dressed to follow the slide contour, a feature you see only on high-end custom guns. And the Westerner.



The Westerner is a Government Model size 1911 with many modern features, and an eye-popping finish.

The layout of the Westerner is classic 1911: The slide is a round-topped Government length (you can get commander-length guns) with the standard lightening flutes at the recoil spring. The sights are a front Novak-type dovetail and an adjustable rear, a Champion, which looks like a thicker BoMar sight. The front sight base is contoured to match the slide radius, a nice custom touch that is becoming more the standard or fashion. The front sight was also clearly fitted and installed before the finish was applied, as you can see one of the finish patterns going across the sight base. The Champion rear is thicker than a BoMar, but unless you're in a contest for the lowest-mounted rear sight, the extra thickness doesn't mean anything. The blade of the rear sight very slightly overhangs the slide contour, something I don't like but which none of my test-fire crew noticed or commented on. I guess it is just one of those cosmetic things that rub me the wrong way, and others don't notice. The slide has cocking serrations only at the rear, angled, and cut with a square-bottomed cut. The ejection port has been lowered and flared. The left side of the slide bears the Olympic rampant lion and "Schuetzen Gun Works." On the right side is "Westerner."



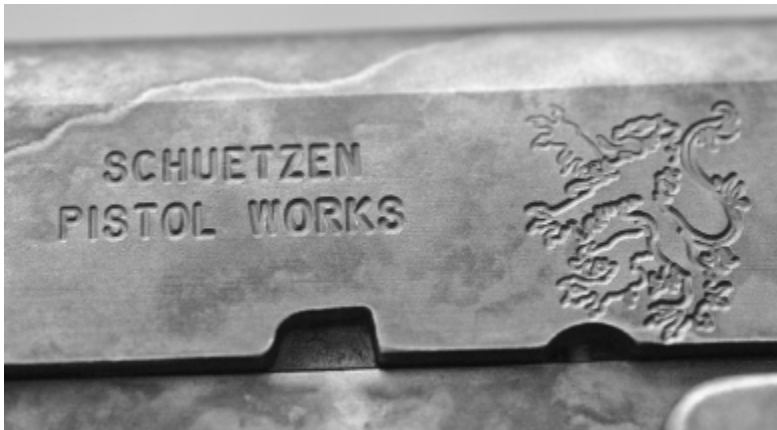
The rear sight is a Champion, like a Bo-Mar but beefier.

The barrel is an Olympic, .45 ACP, marked "NM" for National Match, and is tightly fitted. The slide to frame fit is a bit loose, but the accuracy of the Westerner does not seem to have suffered as a result. The barrel is a standard bushing and feed ramp type, with a full-length guide rod underneath.

The frame is a standard single stack, without a light rail on the dustcover. The trigger is a solid aluminum unit, lacking the lightening holes many have. It has an overtravel screw. The trigger pull is definitely old-style. It has a bit of creep before it stops and then lets go when you reach the full poundage needed to drop the hammer. In the modern era of hammers and sears cut with wire EDM out of tool-steel plate, you hardly ever feel creep any more. Whether it is fitting or manufacturing, I don't know. The creep decreased over time, to the point of being noticeable only when dry-firing and looking for it. The slide stop is the only sign of the Safari Arms heritage, being extended and curved. My objection to extended slide stops is twofold, theoretical and actual. Theoretically, the extra mass of the extension can create problems in function, problems we can avoid by not extending it. As a practical matter, the tip of my right thumb often contacts extended slide stops, preventing them from locking open when empty. I may also be biased: Very early in the IPSC era, I was a locally sponsored shooter. Frank Paris built my guns, and The Gun Room provided me with ammo. (Frank is dead and The Gun Room long out of business, I had nothing to do with either ending.) The fashion at the time was woven polyester shirts, with silk-screened logos. At one match, the extended slide stop hooked my shirt, and I ended up shredding the shirt in the course of finishing the stage. After that, it was standard slide stops and tight-fitting cotton t-shirts for me. The thumb safety is also of the period in its tab, curved and pointed. However, the rear of the thumb safety has been beveled for comfort. Now that, I like. The hammer is unique. I have not seen it on any other pistol I've encountered. The hammers commander loop has been ovaled, but also the root of the hammer has been sculpted as well. Very interesting. The grip safety is much more "Wilson" than it is old Safari Arms. It has a speed bump on the bottom. The right side of the frame is marked with the Olympic name, city and serial number. All the markings appear to be cut, using a CNC machine as a pantograph. One advantage to using a CNC machine is that you can do custom serial numbers. Olympic would be happy to cut a custom number for you, even do consecutive serial numbers. Just remember what the BATFE insists on: there has to be a number in there somewhere. If you simply have to have an Olympic Arms with the serial number "Coolshooter" on it, remember you need a numeral. Make it "1Coolshooter" and you're in.



The trigger is solid, but aluminum and suffers not from lacking three holes.



The Olympic logo, and Scheutzen Pistol Works, marked in the slide. (Obviously before the case-hardening was done.)



The slide stop and safety show their Safari heritage, with the pointy ends.



Slide and frame markings on the right side. Yes, you can get custom serial numbers. Just ask.

The triggerguard/frontstrap junction has not been lifted. It is standard, and the frontstrap is straight and smooth. The mainspring housing is flat, checkered and aluminum. The magazine funnel has a 1980s-era bevel job done to it, and the supplied magazine comes from Metalform. The grips are polymer faux ivory, with the Westerner logo laser-burned into them. They are a bit smooth, and I'm not a fan of smooth grips. But a couple of my test-

fire crew liked them. They certainly do the job, and they are not aesthetically objectionable.

The Westerner is a curious mixture of old and new. Much of it comes right out of the 1980s; the slide stop, safety and the mag well bevel. But the sights are as modern as tomorrow, and flat mainspring housing is certainly 21st century.

The eye-popping feature of the Westerner is the finish: color case-hardened. The finish is not just a cosmetic, mottled bluing, but a real case hardening, done via a cyanide process. (Where in the United States the EPA lets someone have vats of various cyanide compounds, I have no idea.) The result is a surface that is as hard as a file. I know, I took the Westerner apart and had at it with a file in an unobtrusive place, to check. The file would simply slide over the surface, and refused to “bite” into the steel. Which is good, until or unless you want to make some changes. Which is the drawback to any super-hard hi tech finish: you’re sealing the gun up tight at the time of the finish application, and you can’t change your mind or make alterations.



The front of the thumb safety is pointy, but not the back. It is nicely contoured to be comfortable on your hand.



The grips appear to be faux ivory, and have the Westerner logo burned in somehow. (Laser?)



Olympic makes their own barrels, and all the ones I've ever installed or used have been more than just nicely accurate. Some have been almost scary in their accuracy



The standard bushing rides over a full-length guide rod.



With the Champion sight, getting the Westerner zeroed is no problem. Once zeroed, it will serve you well.

However, if the gun as-is is what you want, the hardened surface is going to offer you a lifetime of wear without wearing out, and shrug off rust.

But how well does this gun work? I've had various reports of Olympic guns through the decades I've been working with and on them, reports that

were negative. I've always had good luck. The original Safari Arms guns, before Olympic bought them, were in the "wretched to average" range. I've only ever seen one Randall, and it was simply awful. But all the Olympic-made guns I've ever shot or worked on were just fine. Some were a little rough, but the ones I worked on were right after the buyout, and back then Olympic was working out the bugs. I have an Olympic AR barrel in several ARs, and they are tack-drivers. I have an Olympic barrel in my 9mm 9-pin handgun I used at Second Chance. I used that gun to win loot in the old Handgun Pop and Flop, and set the still-standing record in the Handgun PEE. That barrel was so accurate that Jim Fawcett, another successful pin shooter, had a standing offer to buy it from me.



**Scoff at an Olympic 1911 at your peril. (Some do, I've heard them.)
The next guy who beats you at a match may well be shooting one.**

The Westerner sent is a solid gun. There were no mis-fitting parts, the barrel was correctly timed and fitted, the slide moved smoothly on the frame. If you were not to look at the maker's name, you would be hard-pressed to tell it from all the others. In function it worked 100 percent. As I

was curious about the Olympic, and the finish, I took it along for all the range sessions during the time I had it. It got on the order of 2,000 rounds put through it, and never failed once. If it got cleaned in that time, one of my test shooters cleaned it when I wasn't looking, a highly unlikely situation. (They leave the un-fun stuff to me.) And my test-fire crew knows that if they have a malfunction, I have to see it. As none of them reported any to me, I can only assume none happened.

As for accuracy, the Westerner was as good as any shooter, and plenty accurate in the Ransom rest. It had the tendency to occasionally throw a shot a bit out of the group. There were several potential under-2-inches groups that were spoiled by a flyer that opened things to 2-1/2 to 3 inches. Still, the worst groups were less than the apparent width of the front sight, which for me is the deciding factor in a competition or duty gun. Given its utter reliability, entirely suitable accuracy, and acceptable trigger, I can see no reason not to keep such a gun. Were it mine, I'd see about changing the extended slide stop for a standard one, but that is strictly a personal preference. It caused no problems, and my test fire crew never had occasion to gripe about it. For match use, I'd simply feed it the Oregon Trails 200 grain L-SWC and Vihtavuorii N-310 load, as it shoots that load exceedingly well. For carry use, I'd feed it the Hornady 200-grain XTP load.

Turn up your nose at an Olympic Arms Westerner at your peril. You may well get beaten at the next match by one.

Para Ordnance

I first ran into Para Ordnance, as a few lucky others did, at their booth at the 1988 SHOT Show. Ted Szabo, the President, was showing off their new design: a hi-cap 1911 frame. Being the 1980s, they made it in aluminum (everyone wanted lighter guns for carry back then, just like now) and in .45. Yes, the .38 Super was proving to be the winning caliber in competition, but the .45 had a strong hold on shooters back then. (And now.) And no one who could get permission from their department to carry a 1911 wanted anything but a .45. (Times were different then, but not much.) I saw it, I liked it, and as soon as I got back to the shop I mailed an FFL off for a frame. I built it up and shot it for a while. The then-owner of the shop wanted it. “Pat, I want that gun to carry. I promise if I ever sell it I’ll sell it back to you.” Well, I’d heard that one before. Tim had bought an earlier gun from me with the same promise. And sold it to a buddy who liked it without giving me a chance to buy it back. I was a lot more sentimental about guns back then. I told him that he didn’t want mine, I was right-handed and he was a lefty. I didn’t have an ambi safety on it. But I’d be happy to build him one. Which I did. And he sold it soon after.

So I’ve known about Paras from the beginning.

I know, I know, we covered Para in the first book. However, Para Ordnance seems determined to embarrass any would-be 1911 experts out there. Not just the technical improvements but also the number of models, options, features and finishes available never stop increasing. Since the first book, Para has probably dropped more old models, and added more new ones, than the entire catalog of most of the makers in the 1911 field. Just when you think you’ve got it all memorized, anew press release arrives in the mail. Or worse, the new catalog. The big news that has everyone’s attention now is the new extractor.

The Power Extractor is a new take on the new conundrum of the 1911: Should it have an old internal extractor that needs tensioning, or new external extractor that uses a coil spring for tension? The Power Extractor is an internal that uses a coil spring. The “X” as each Para slide containing the

new Power extractor is marked, fits in a larger extractor tunnel. The body locks in the firing pin stop plate, and the coil spring and plunger lever the claw. The claw had half again the contact area on the case rim as the original design has. While in many cases more is not better, here more certainly can't hurt. Many "gunsmithed" 1911s suffer extraction problems due to the person working on them having polished the extractor and reduced rim contact surface area below a useable amount. Short of leaning into a buffing wheel with the Power Extractor claw, I can't see reducing it enough to cause problems. Not that you need do much polishing. We should always be skeptical of any new design that calls for more parts than the old design. However, in the case of the Power Extractor I don't see that being a problem. the extra parts are sealed inside the extractor tunnel, and have extra oomph and leverage to deal with whatever might come along.



I've been familiar with, and shooting, Para Ordnance pistols almost from the beginning

As a test of the new Power Extractor I selected a new Para Ordnance SSP to abuse. First I let my test crew shoot a couple of cartons of Black Hills 230 hardball through it. I then opened a couple of ammo cans of lead

reloads. They were leftover Second Chance practice ammo: 230-grain lead round nose bullets from Oregon Trails over a charge of WW-231 I really don't want to talk about. In shooting bowling pins I found that mass meant more than velocity, momentum was king. I practiced in volume with 230's loaded to 925 fps, and shot at Second Chance with 240 flat nosed bullets at 900 fps. A Power Factor of 215, where USPSA Major is now 165. The SC practice load was plenty dirty, but my bowling pin guns were reliable with it. It just took more powder than loading manuals recommend. Once the Para SSP was good and grubby, I stuffed it in a case and left it alone for a week. I wanted the powder residue to crust up and get good and hard.

I took it along on a follow-up range session and proceeded to put a carton of Wolf steel-cased ammo through it. No failures. Based on a limited test that is similar to what many shooters do as common practice, the Power Extractor seems to be up to the task. And, I have not found Wolf ammo to be the problem that so many shooters have reported. I cannot explain the differences between their experience and mine.



Paras are well-represented in the competition circuit, and have many desirable options right from the get-go.



The Para SSP in its hard case. Mine came without magazines, but yours will have them.

Besides the Power Extractor, Para has been upgrading their entire line of pistols. Instead of the plain blued finishes of the first book, we now have options. And the standard sights have been replaced with tactical sights fitting in Novak dovetails, front and rear. We have sizes, options and looks not available before. So let's take a look.

SSP

The Government Model, single-stack single-action pistol of the moment. (You can be sure Para will be improving even after this book comes out.) The sights are the Para tactical, white three-dot. The front is a sculpted ramp, with the sides of the dovetail base clipped off. The dovetail in the slide is left open on the sides, an interesting look. The rear is a tactical pyramid, with serrations on the rear face, aides that come up to the notch on an arc, and a large locking screw top center. For those of us brought up on a flat-top rear sight, the angle takes a little work to get used to. But once you've adjusted it is as fast as anything. The slide is round-topped. The right flat has "SSP" marked on it, the ejection port is lowered and flared. The left side of the slide has "Para X 1911" on it. There are cocking serrations only at the rear. They are formed by pulling a ball-end mill cutter across the slide in a spacing wide enough to bring the radius of

the cuts up to a sharp edge. The serrations provide traction without being lint and dirt traps, as so many fine-cut cocking serrations end up being.



The trigger is the modern synthetic target trigger, and the slide stop and mag catch are stainless.



The black synthetic finish is nicely accented by the stainless parts.

The barrel is a Para, with Para's integral feed ramp, a bushing up front and a full-length recoil spring guide rod. The barrel has a barely-perceptible spring to the locking fit, and the slide a barely-perceptible side-to-side play. Neither allow for any noise when shaken. The controls are stainless, contrasting with the matte black coating of the slide and frame. The slide stop is traditional 1911, the thumb safety appears derived from a Chip McCormick design. The thumb safety clicks up and down positively. The grip safety is a Wilson design or clone, with speed bump. The grip safety is properly sensitized. It allows trigger movement once the grip safety has pivoted between one-third and half its travel.

The trigger is either a McCormick or McCormick clone, with a synthetic face, an overtravel screw, and fitted properly to its track. It has a bit of overtravel, but the trigger pull is clean and crisp. No complaints here. The frontstrap is smooth, and slightly "lifted" at the trigger guard. The mainspring housing is flat and checkered. The magazine well is nicely and gently beveled. The grips are wood, with the Para Ordnance logo inset, checkered in the double diamond pattern, and held on with allen head screws.

The overall impression is of a solidly-built 1911 that should get the job done without problems. And indeed it did. Accuracy was thoroughly respectable, with Ransom groups hovering in the 2-inch range. Some below, some above, no great surprises and no horrible groups. The gun as shipped didn't have any magazines. I suspect that then it came time to get guns to me, this one was yanked off the rack and thrown into a box for shipment. After all, I'm a gunwriter, right? I have to have a bunch of magazines lying around, right? Yes I do. And I tried a cross-section of them in this pistol. All worked.

If you're looking for a dependable 1911, want a full-size gun, and are tired of worrying about extractor problems, then the SSP could be the gun for you.

Warthog

In the last half of the 1990s, and the first half of the first decade of the 21st Century, we had multiple forces driving compact gun development. First was the “Assault Weapons Ban” of 1994. They weren’t assault weapons, and they weren’t really banned, but a delicate consideration for the truth has never been the forte of politicians. What did matter was that no new magazines could be produced that had a capacity greater than 10 rounds. The old ones could be bought, sold, traded and repaired, but there could be no new ones except for police. The next force was the increase in “Shall Issue” carry laws. Before, most states that issued carry permits required some proof that you needed one. Commonly, the proof came in records of bank deposits, proof of business conducted in valuables such as expensive jewelry, or in having made large contributions to the campaigns of the politicians in office.

“Shall Issue” means that unless the law enforcement agency inquiring has proof that you should not get one, you shall be issued a carry permit once you have finished the application process. The number of States that have reasonable carry laws is now between 35 and 45, depending on how you define “reasonable.” And a lot more people are carrying.

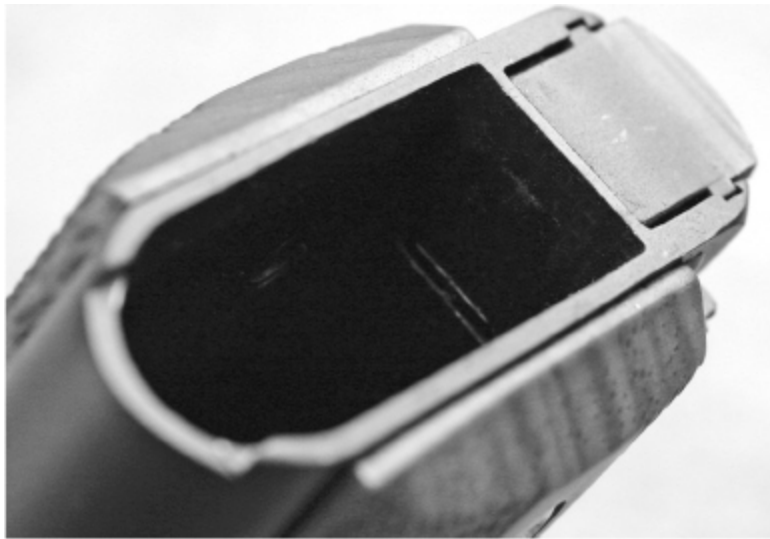
The last force at work was the ammo makers. Once they had figured out how to get bullets in high-velocity calibers such as 9mm and .357 Magnum to expand, they didn’t stop. They proceeded to design bullets with reliable expansion right down to the .45 with its modest velocity.

So a large number of people were applying for carry permits. They could not get magazines greater than 10 rounds. If so, why carry something as big as a Beretta 92, just to have 10 rounds? And 10 9mm rounds, at that. If you’re stuck with 10, get 10 big ones. And hey, .45s now expand.

We suddenly had more compact .45s than we could shake a stick at. And the Warthog is the culmination of those forces.

We have a compact hi-cap. The barrel is only 3-1/8 inches long. From the bottom of the slide to the bottom of the frame, the Warthog is only 3 inches high. Short, fat, ugly and black. Well, short and fat, and black too, but not ugly. On top, the sights are the same as those on the SSP: dovetailed front and rear, combat pyramid and with three white dots. The slide is marked on the right with “Warthog” and on the left with “Para X Hi Cap.” The serrations are the same as on the SSP, ball-end mill cuts, angled

forward and offering a good purchase without attracting gunk. The barrel is coned, and lacks a bushing. The lack of a bushing requires that the recoil spring retainer be a “reverse shoulder” retainer, held in place by a lip back at the rear of the slides recoil spring tunnel. The recoil spring system of the Warthog is a dual-spring captured unit, with built-in full-length guide rod. Given the lighter mass of the short slide, and the quick unlocking of the short barrel, you should not be surprised to find the recoil spring system stronger than on a larger pistol. Such is the price of a compact gun.



The mag well is not beveled, but that can easily be changed. Or, install a mag funnel.



The modern choice: a flat mainspring housing. If you like arched I'm sure Para can find one.



The Warthog: black, compact, and some say ugly. However, if you need a compact .45, the Warthog is very attractive.



Stainless accents, with an abbreviated grip safety. Short, but it works.

The slide stop, thumb safety, grip safety and magazine release are all stainless. The slide stop is the same standard, and the thumb safety the apparently modified McCormick, of the SSP. The grip safety is a whole lot shorter. After all, if you shorten the frame you shorten the mainspring housing. There has to be a certain amount of travel, and spring strength, in the mainspring, or you can't have a functioning pistol. By the time you've got that taken care of, there isn't a whole lot of grip safety left. But there is one, and it does work as expected. In this case, shorter does make things better. The speed bump of the grip safety, while appearing vestigial, is higher in your hand. And thus more likely to do its job. Even those of us who find grip safeties do not always work when we have our high hold on the gun will find the Warthog grip safety works. Even consciously trying to arch my hand away from the grip safety, I find it is still depressed enough to fire. Let's hear it for proper engineering!

The grips are synthetic and black. The grip screws are stainless allen head. The magazine is fat and short, like the gun. They are basically the upper halves of regular Para hi-cap magazines. The baseplate is the standard Para synthetic pad. As a result, you can use a regular hi-cap magazine in the Warthog, although that does negate the compact size for concealment. The best way to work that arrangement is to carry the Warthog with the 10-shot mag, and have a h--cap as your reload. One spare gives you 25 rounds of .45 ACP on hand. Two reloads brings that to 39 rounds.

For accuracy, I can only give you my impressions of accuracy over sandbags and in drills. While I have Para Ordnance hi-cap inserts for my Ransom rest, the shortness of the Warthog frame posed a problem. Perhaps I haven't found the technique, but I couldn't get the Warthog to settle down. (All jokes aside.) I'd shoot some settling groups, and then the point of impact would shift. Sometimes it would shift mid-group. When it wasn't shifting, it seemed to be in the 2- to 3-inch range for 25-yard groups.

What is shooting the Warthog like? Work, at least for me. The short frame of the Warthog puts the end of the mainspring housing right in the middle of the palm of my hand. Ball ammo and reloaded equivalents aren't too bad. But a high-speed hollow-point, or a +P load hammers the corner of the mainspring housing right into my hand. But not all of my testers had the same impression. (No pun intended.) Some found the Warthog to be a real pussycat. We could not find any ammo that gave it pause. While the short barrel did cost us some muzzle velocity, reliability was never a problem. We ground through a couple of cartons of ammo without fail. While there were other more exotic guns to be shot, my testers kept coming back to the Warthog. I think some of them might even be looking for a big-bore carry gun. This one would do.

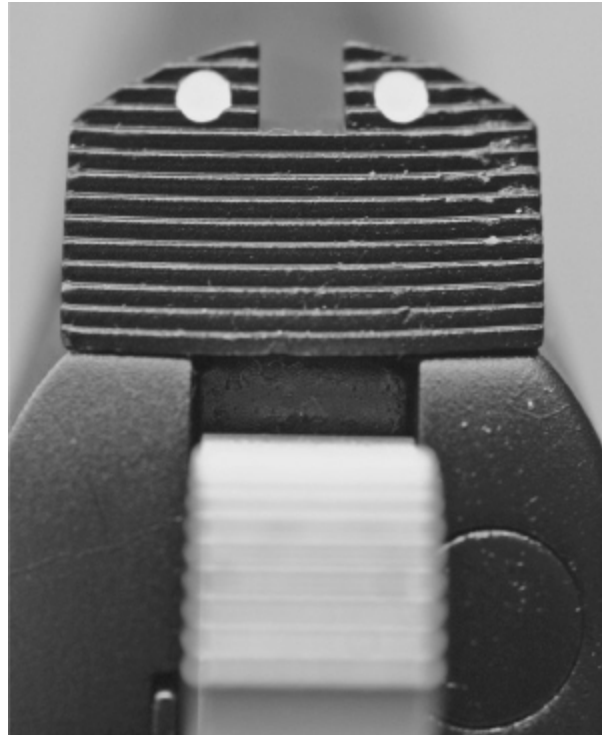
And jus tot prove my point, as I was working on the wrap-up of this book, Para came out with the news of a new Warthog: the stainless 'Hog. Yes, it is a bit heavier, but given the compact nature, a little more mass to dampen felt recoil might not be a bad thing. And it won't rust. At least not form those of us with normal sweat. My friend Bart, who once rusted a gun through a hard-chrome plating job, might. But the rest of us won't.

Carry

As in the name of a model, not a supermodel that is 6 feet tall and skin and bones at 135 pounds. (And lying, saying she's 115.) No, a Carry LDA. One of the big problems shooters have with the 1911, at least when it comes to defensive carry, is the mode of carry: cocked and locked. Many are not comfortable with a pistol where the hammer rests ready to go. The oldest attempt to change had been the Seecamp conversions. Expensive and hand-built, they worked but never caught on. Then Colt came out with the Double Eagle in 1990. It suffered from two results of the same problem: Colt had no money for R&D or anything else. As a result, the engineering of the Double Eagle was almost Soviet in its crudity. And the quality control was as bad. The grips were designed to hold springs and other parts in place. If the grips came loose, the parts could wander and malfunction. Noted gun writer Dean Spier received two consecutive defective Double Eagles while trying to write about it. I saw one at the gun shop soon after it came out, and immediately hated it.



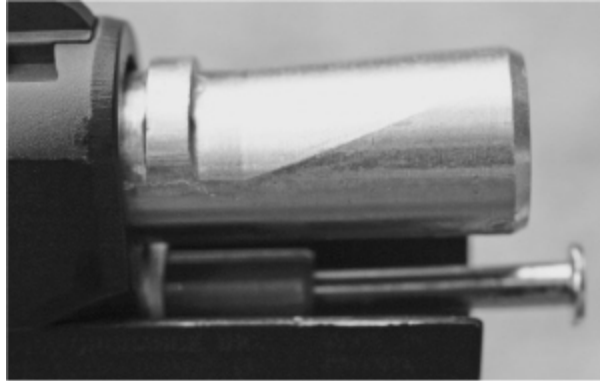
The Warthog holds ten rounds of .45 ACP in its blocky little magazine.



A low-profile, three-dot sight system.



If you need more, you can use the full-sized Para .45 magazine, holding 13 or 14 rounds of ammo.



The Warthog barrel, being so short, does not use a bushing, and the recoil spring system is captured and has a full-length guide rod.



If you live in a hot and humid climate, then the new Warthog stainless is just the thing for you.

It died an early and unlamented production death.

Para did much, much better with the LDA. The trigger pull is indeed light ("Light Double Action") and the grips are not called on to do anything but give you a place to hang on. And now the Carry is refined even more than the LDA we looked at in the first book.

The slide is the same length as the Warthog. The Carry shipped to me is stainless. It has the same sights, but the markings differ. On the right, it says "Carry" while the left of the slide is marked "Para X LDA" The same Para

cocking serrations lead you back to the tactical pyramid sight. The rear face of all the rear sights on the Paras tested are serrated, and blend nicely with the contour of the slide itself.

Where things differ is in the frame. It is stainless, and a single stack. The slide stop and magazine release are normal. The safety appears normal. It is not. Regardless of whether the action is cocked or not, you can push the safety up. So simply pushing the safety does not tell you if the mechanism is rest to shoot. As the LDA is not a re-strike double action, you can't simply keep stroking the trigger to repeatedly strike the firing pin. If the mechanism is rest, pushing the safety up takes the trigger out of the linkage, and pulling the trigger simply give you trigger finger exercise.

The grip safety is an amputated beavertail. Like the Detonics, the grip safety is contoured to match the tang of the frame, and a rounded tang at that. It does not have a speed bump, but is wedge-shaped and only needs a small amount to depress it clear of the trigger. The frame is half an inch shorter than a Government Model, and its flush magazine holds only six rounds. But it can accept regular single-stack magazines, so you can reload with seven, eight or ten-round magazines. The mainspring housing is shorter than normal (as are the grips) and grooved. The grips are flatter than normal, in keeping with a handgun meant for concealed carry. The frontstrap is not checkered. It is not stippled. It looks like Para took the same kind (or the same) ball end mill and grooved the frontstrap with eight grooves. They aren't large enough to be "finger-grooves" and they aren't left as sharp as the cocking serrations. (It looks like they were bead-blasted after being cut.) but the effect is a non-slip grip.

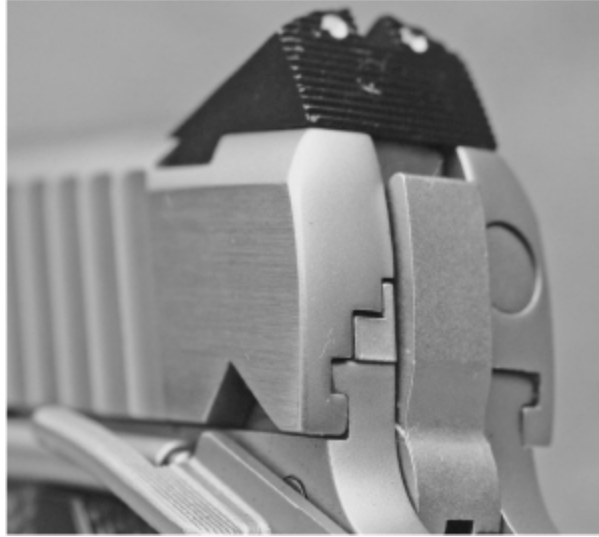
The all-steel construction of the Carry means a bit more weight to be packing. But as compact and flat as the Carry is, a good holster should have it unobtrusive and easy to carry. And the weight makes it a whole lot more fun to shoot than the Warthog. My testers really liked it. And as it is a "hammer down" carry gun, packing it in a fanny pack, or having it in a coat pocket for the walk out to the car is a lot easier on the mind that a cocked and locked 1911.

You should not be surprised when I tell you the Carry worked through all the ammo I had allotted it. It didn't care about lead, jacketed, round-nose, hollow-point, it just shot them all. I shot it over sandbags to check

accuracy and found it easy enough to keep all my shots well inside a four-inch diameter. Often less. The LDA lends itself to such accuracy testing. The trigger comes back very easily until it hits the internal stop. You can then settle down and squeeze the last of the trigger pull weight out while watching the sights. It really was a “trigger-cocking” trigger mechanism. I managed to shoot a bunch of three-inch groups, and one where five shots nestled into two inches. I say it is a four-inch gun simply because in speed shooting no one is going to be doing the old PPC “trigger cock and squeeze” method. They’ll be pulling straight through. And four inches pulled straight through in double action is pretty good.



The Para Carry is a compact LDA in stainless, perfect for big-bore packing.



A flat mainspring housing, and a grip safety with definite Chip McCormick influences.



The trimmed grip safety does not pose a problem, I was never nipped by the slide or hammer.



Todd Jarrett has done very well for over a decade, shooting with Para guns. If he likes them, you really should be paying attention.

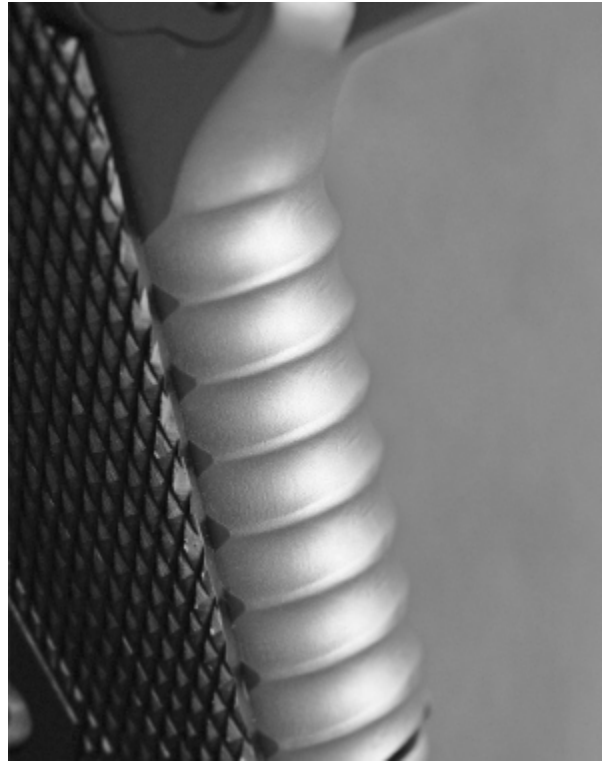
Follow up on the LDA

Back for the first book, Para sent me a bull-sized LDA to play with. In the process of gearing up to do this book, I found it languishing in the safe. After Volume 1 I fussed around with it for a while, then set it aside, distracted by something else. I thought I'd bring you up to date on those experiments. The LDA was meant as a full-size carry gun, which it can be, but is a bit large and heavy. Especially with the Carry LDA now out. What I had done for a while was try loading down, to make it a big-bore but soft-shooting Production gun. In USPSA Production Division, you get no extra score for shooting Major. So I experimented loading Berry's 185-grain plated round-nose bullets down to Minor. If you push a 185-grain bullet 800 fps, you end up with a 158PF. A bit stout for Minor, but not a big deal in a 1911, especially a full-size Government Model. Using ten-shot McCormick or Wilson magazines, you aren't giving up anything to the legions of Production shooters shooting 9mm, except the need to load your own

ammo. The experiment worked, but the need for a magazine funnel to do speed reloads in a 1911 single-stack, (where tapered-top 9mm magazines have the advantage) brought the whole thing to an impasse. Some modifications aren't allowed in Production (the U.S. Production rules are a lot more forgiving than International ones are) and a bolt-on mag funnel is one of them. Still, a good idea.



You can even have a hi-cap LDA carry gun form Para. At the rate they're going, you'll be able to have everything you want.



The frontstrap is a new design from Para, and quite good at providing a non-slip grip. It looks a bit odd at first, but you get over it.

For those who haven't been paying attention, a fellow by the name of Todd Jarrett has been doing pretty well with Para Ordnance guns on the USPSA/IPSC circuit. While he usually shoots either Limited or Open, he has done well in past Nationals shooting in Production with an LDA. Whether you're shooting USPSA/IPSC or IDPA, Para has a bunch of guns that can be competitive in a bunch of Divisions. And carry guns for all occasions.

In the future I'm sure Para will have a whole raft of new models to test. Although how they can top this trio, I don't know. If you don't have a Para, you should probably get one.

Rock River Arms

If you weren't looking for locations, it would never occur to you that so many firearms manufacturers are based in Illinois. The reason is simple: Illinois is Indiana saddled with Chicago. Once you get outside the big city borders, you have a pretty reasonable State. And it has lots of machinists. So, Rock River is another manufacturer who can take advantage of the pool of skilled labor.

Rock River sent me two 1911s. One is a railed tactical, and the other is a PPC Special.

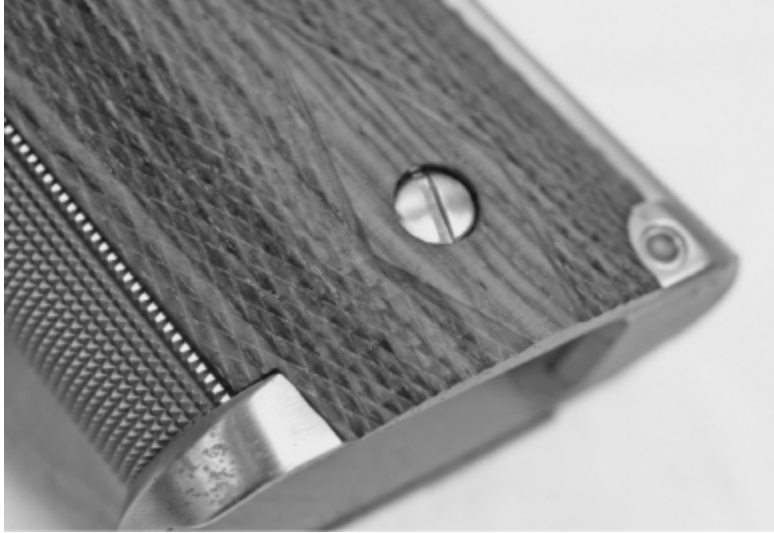
The Tactical is a Government Model in .45 ACP tipping the postal scale at 37.6 ounces. It came in a lockable blue plastic case, sans manual, magazine, fired case, or lock or paperwork. I got the impression that when it came time to send me a test gun, they simply plucked the next unclaimed gun off the line, jammed it in a box, and shipped it. Given the state of paperwork and official requirements for selling firearms, this can't be the standard box contents. No problem. As I found out, the gun itself was plenty enough to fill the box. The slide is blue steel, the frame stainless. On the slide we have a nicely lowered and scalloped ejection port, grasping grooves fore and aft, and a lack of markings on the right side. The left side has "MODEL 1911-A1" rollmarked on it. The sights are a Novak-dovetail up front from Trijicon, and a Heinie Slant Eight on the rear. The night sights thus are a pair of dots that you arrange vertically. Unlike three-dot sights, which are meant to be lined up 1-2-3, and which can end up 2-1-3 to the detriment of good aiming, the straight eight or slanted eight (the slant is the face of the rear sight) cannot be mis-aligned.



The Heinie slant 8 rear sight.



The tactical Rock River 1911, in its hard case.



The grips come over the low-profile mag funnel.



The frontstrap is checkered, and the joint lifted.



The Rock River tactical has an accessory rail, for your light.



The very slick, very cool, mag funnel.



Sure look like Ed Brown safety, grip and thumb, and hammer to me.

The barrel is a Kart, fitted correctly. It locks up tightly, but does not show any hesitation in closing. The front is standard 1911, bushing and no full-length guide rod. Just what John Moses Browning designed. Things get interesting on the frame. On the dust cover is the big change. The dustcover is machined oversized (you can clearly see the step up from the standard frame width) for the light rail. The Tactical as sent had a Surefire X-200 on it. The mounted X-200 sits with its front lens behind the muzzle of the Rock River, giving it a bit of protection from muzzle blast and powder residue. The raised section of the rail ends just before the slide stop lever on the left, and the head of the slide stop lever pin on the right. The raised section acts to protect the head of the pin from your trigger fingertip when you have your finger straight along the frame. The thumb safety is a Chip McCormick, or so close in appearance that if you were to drop it on my desk and ask me, I'd instantly say "That's one of Chips." The thumb safety is not ambidextrous, although I'm sure you can order one. The grip safety is an Ed Brown, with a speed bump at the bottom. The hammer appears to be a Chip McCormick, and the trigger is a basic aluminum with three holes in it speed trigger.

The meeting line between the underside of the triggerguard and the frontstrap has been lifted and squared, allowing for a higher grip on the

frame. The frontstrap and mainspring housing are both checkered twenty-five lines to the inch, and the mainspring housing is flat.

The magazine funnel is the coolest part of the gun. Back in the old days we'd make custom magazine funnels by welding or silver-soldering key stock or gauge stock to the frame, and then carving out a funnel. The usual method was to make the funnel as wide as, and contoured to, the grips. I always wanted to do something a bit narrower, and hide it partially under the grips. Well, the Rock River tactical has that. The funnel is only 1 inch wide, and the ends of the grip panels come down to cover it. A nice custom touch on a tactical gun. The grips are double-diamond wood, nicely figured and in this case a definite red color. The frame is polished on the sides and matte on the rest of the surfaces.

The trigger pull was a crisp five pounds, perfect for a pistol intended to be in a tactical thigh rig on a SWAT operation or in a military context. The chamber was a bit short, at only .902" deep, but a carton of mixed factory ammo didn't gunk it up enough to cause problems. The extractor tension was 17 ounces, a little lower than some like, but the Rock River never failed to extract an empty, or pull a loaded round out while unloading.

When it comes to accuracy, I've seen everything. I've seen guns (and not just 1911s) that loved anything lead and hated jacketed. I've seen some that shot well only with a pet load. I've seen a very few that shot everything well. The word on this particular Rock River is simple: hardball. If you want it to shoot well, feed it 230grain jacketed round nose ammo. It will shoot nice 2-inch groups for you all day long. I couldn't find a hollow-point it shot better. Custom reloading ammo didn't make any difference. Had I this 1911, I'd simply lay in a supply of Black Hills 230 JRN and be done.



The Surefire X200 is a perfect fit.



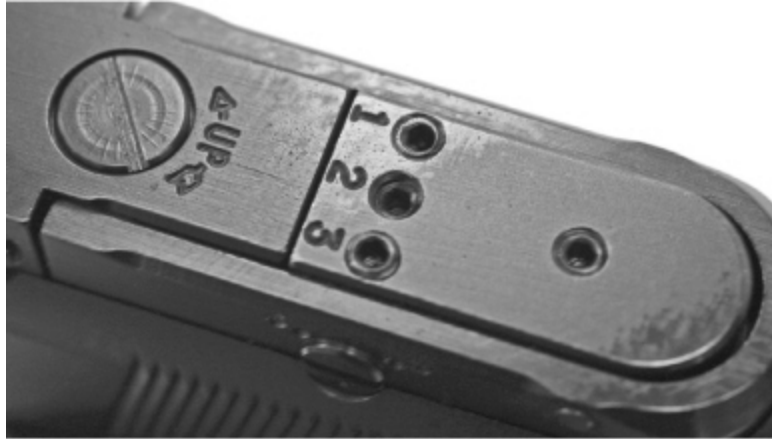
Hardball. That's all the Rock River 1911 wanted. Feed it 230 jacketed round nose and it is happy all day long.



A Novak front sight, with tritium insert, completes the ensemble.



The Rock River PPC Special. No flash, just lust.



The tri-set adjustment screws on top of the sight body.



The superb Rock Island trigger job makes shooting accurately easy.

None of the testers reported any sharp edges to cut or abrade. We put a bunch of ammo through it in several sessions, and it chugged along without fail. Should you be in the market for a tactical 1911 with accessory rail, you would do well to look at a Rock River Arms.

PPC 9

In the old days, only revolvers shot PPC. Basically, PPC is bull's-eye shooting using double-action revolvers, and firing from positions. It has a lot more in common today with bull-s-eye than it does to any practical

shooting competition or training. However, in a lot of places the only place to shoot in the winter is indoors. And many indoor ranges have PPC but not IPSC. I started shooting PPC with the winter league of the local sheriff's department in 1984. I used a 1911 in .45 ACP. The lightest load I could get to cycle the down-sprung gun was still a "magnum" load compared to the .38 special wadcutter ammo everyone else used. I was the pariah, put into the righthand slot on the line so my brass wouldn't bother anyone else. I shot that league for several years, and learned a lot. I shot a 596 average with a .45, then built a .38 super for PPC and Steel Challenge shooting. With the .38 my average rose to 598. In the late 1980s, after I left, police departments really began shifting to the 9 mm pistol. And PPC gradually recognized the shift, and began offering a pistol division on competition. Competitors used to 598, 599 or a clean 600 with their revolvers were not too happy with the initial scores with Glocks, Berettas and S&W pistols. However, since some departments somewhere were using, allowing or issuing 1911s, why then, you could use a 1911 in PPC competition. (You can only shoot above the club level if you're a police officer, but that is a different subject, and a personal beef I have with the NRA. But I digress.)

It didn't take long for PPC shooters to figure out that while a .45 was plenty accurate enough, and the big holes meant the occasional extra point or X in the score, recoil was too much. So, given the choice between the super-accurate, reliable, easy to reload and soft-shooting .38 super, or making the 1911 Government Model work reliably with the 9mm cartridge, law enforcement pretty much everywhere went with the 9mm. To understand why, you have to know that for the most part police officers are incredibly cheap when they can get away with it. If the department is going to support or recognize a PPC team, they'll provide ammunition. However, getting custom-loaded ammo through the department is a hassle. And no police officer would load his own if the department offered free ammo. So, rather than build a network of custom loaders to provide Match .38 Super ammo, police officers insisted that gunsmiths build accurate guns to take the prevalent (and free from the department) 9 mm ammunition.

I'm sure someone reading this will chalk my opinion up to sour grapes, that "He's not a copper, and jealous" or "He can't shoot, so he's griping."

Just ask around. You'll quickly find it's true, many police officers, to put it politely, "pinch a nickel until the buffalo moos."

The result is we now have a choice of readily-available super-accurate 9 mm 1911 pistols. What they sent me was their Unlimited Police Competition 9. What a gun.

The frontstrap is lifted and checkered. The mainspring housing is an S&W, with the funnel blended to the mag well opening. The sights are really trick. The front is a billboard of a blade, to provide the correct height for the tri-select rear sight. On the rear sight body you'll see three set screws. Each of them adjusts the rear sight for a particular setting. What you do is simple. You set the side locating nut to "#1" and you then zero the Rock River for the closest distance at which you shoot PPC. Windage first. Once that is dialed in, then turn the #1 top nut so the rear blade is as low as possible and zeroed on the target. Outdoors that would be fifty feet, indoors seven yards. You then step back to the twenty-five yard distance (outdoors, indoors it would be fifty feet) and click the side nut to #2. You make your sight adjustments at twenty-five yards using the top screw only, until your groups are on-center. Then step back to fifty yards and repeat.



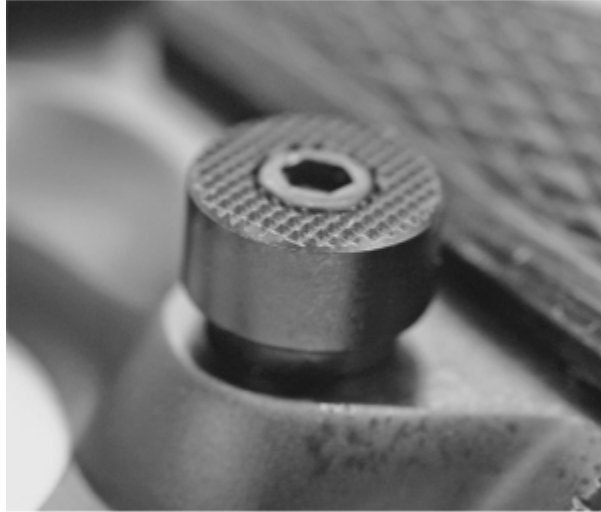
The mag funnel. Can't miss a reload with this



The frontstrap is lifted and checkered.



The side of the sight, showing the setting nut to select which of the three settings you are using.



The over-sized magazine release button.



Your basic modern grip safety and flat mainspring housing.

At 50 yards it is common for PPC shooters to use what is known as a “neck hold.” Instead of putting the front sight in the center of the big, black, B-27 target, you hold your sights so you have the head of the target above your sights, and can see the front blade and rear blade at the shoulders of the target. Yes, your bullets will be hitting over a foot low, on the X ring. If you need to, you do the fine-tuning of windage at fifty yards.

Now, when you go to shoot in a match, you simply click your rear sight to the corresponding distance and you are perfectly zeroed. Why all this folderol? The indoor B-27 has a ten ring the size of a playing card and an X

ring the size of a business card. Outdoors, the X ring is the playing card and the ten ring is an index card in size. Matches are commonly won with perfect scores of 600 rounds for 60 shots fired (or 1,500 point for 150 shots fired outdoors) and ties settled by x-ring counts. A hotly-contested indoor league may require 600 after 600, with x-counts in the low 50's each time, to win.

The tri-set sights let you do that. The sighting radius of the six-inch barrel helps, and the accuracy of the Rock River PPC gun makes it almost easy.

This 1911, loaded with Hornady XTP ammunition, is so accurate it is frightening. Single-hole groups were so much the norm that it is easy to get an inflated opinion of one's abilities. Had I this gun back when I was shooting in the Sheriff's department league, I would have turned some heads, set many new records, and been frustrated at not having a division in which to shoot it. (Back then, autos were merely a curiosity in PPC.)

The mag button is over-sized, so you can reload quickly. (That's a joke, as the "fast" string in PPC is six shots, reload and six shots in twenty seconds. At seven yards.) The button is nice, but almost gilding the lily, and who is going to flub a reload with that mag funnel? The trigger is very nice. The fit of slide to frame, and barrel to both, is perfect.

600? Piece of cake. More than fifty X count? For that I have to lay off the coffee in the morning.

If you want a match-winning PPC pistol, or just a beautifully-engineered pistol that will amaze your friends with accuracy, you need look no further.

SigArms GSR

Sig is perhaps better-known as the Swiss-German company formed to let the parent corporations of both countries get export access. Both Swiss and German laws have peculiarities in export restrictions, so the new company (as in: new back “after the War”) could give both access. Since then the whole landscape has changed, so the old name of “Sig-Sauer” was changed to SigArms when they set up a US import division.

The basic pistol for a long time was one variant or another of the Sig pistol: an alloy-framed double-action with decocking lever on the frame. I’ve seen one or another, and fired a bunch of them through the years. At first it was brought in as the Browning, in a number of calibers. That was some time ago. My friend Mas Ayoob has an unfired, new in the box Browning-marked model in .38 Super. It was loot at a match, and no one wanted it. He recognized it as a potential collectors’ piece in 20 years’ time, and snatched it up and stuffed it in his safe. A decade later, I had a Detroit police officer who was working narcotics bring in the same model, but by then with SigSauer markings. His too was in .38 Super. He carried it because it wasn’t an obvious “cop’s gun” (how times have changed) and it was broken. Why have me fix it? It was departmental property, in use after being snatched from the evidence room instead of sent to the smelter. If he turned it in for repair he’d never see it again. It would either be issued to someone else with more “pull” or it would be sent off to the smelter, and he’d be issued something else. He had such confidence in that pistol that he was willing to pay out of his own pocket to have it fixed.

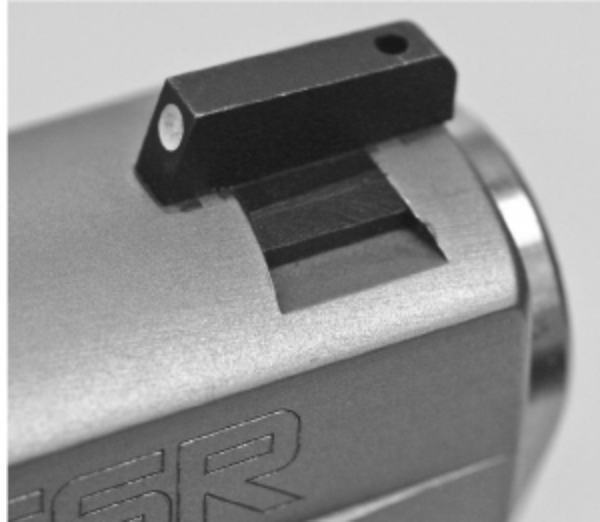
Since then Sig has gone on to refine that pistol into a hi-cap 9mm and .40 (the old Brownings, and the one I fixed, were the Sig 220, single-stack guns) into the Sig 226. The 226 has been bought by a bunch of police departments, the Navy SEALs, and a whole passel of taxpaying citizens. It has also been made smaller, made of stainless steel, turned into competition models, and recently a model of it was selected to be the Air Marshals sidearm. However, throughout all that it remained a double-action or double-action derived pistol. It wasn’t a 1911.



The Sig GSR in its lockable plastic case, with magazines.



You need a special key to turn the lock.



“Make a 1911 slide look like a sig.” A tall order, but nicely done.



Standard bushing, standard recoil spring setup.

With the seemingly unending interest in, and voracious appetite for the 1911, Sig decided to get into the business. But they needed someone who knew the lay of the land. For that they went to Matt McLearn. Matt had been a hard-charging USPSA/IPSC competition shooter in the early 1990s. He was the Open National champion in 1993. (Can it have been that long?)

After winning, he settled down to a life of custom gunsmithing. Sig approached him to help in design of their new pistol, the Granite State Rail, or GSR 1911.

Paul Erhardt at Sig sent me two, one stainless and one blue. The only difference between them is the steel, as dimensions and features are the same. I'm sure in the fullness of time Sig will offer additional models such as commander and compact, and maybe even other calibers. But for now, you only have to choose between stainless or blue.

GSR

The GSR is a single-stack 1911, with the latest and hottest addition, a light rail. But look closely and you'll see some very interesting details. And a noticeable change in feel. First is the slide. If you had handed me a slide, or slide forging, and told me to "make it look Sig-ish" I would have spent a lot of time scratching my head. The sculpting done to the Sig GSR, on the front and sides is very reminiscent of the slides Sig puts on its double-action pistols. Matt and Sig managed to make a 1911 slide look like an echo of a Sig slide. The sights on top are Novak, and Wayne certainly hit a home run when he came up with the basic design all those years ago. You can hardly sell a 1911 in today's market unless it has Novak sights on it. Behind the ejection port is a honking big external extractor. I'm not really sure we need externals, but many shooters want them. They work. Old farts like me can get over it. Not all external extractors are made the same, but his one is certainly made large. And reliable, as we'll see. What I'm not so sure I'll get over is the firing pin lock behind the extractor. You need a little two-pronged "key" to turn the lock on and off. Turned one way it blocks the firing pin. Turned the other way it doesn't and the pistol works as expected. I understand that Sig, like all the other makers, has to go along with the sometimes witless requirements of legislators, but I have to go with Jeff Cooper on this one: Safety is something that happens between your ears, not something that you hold between your hands. I guess in time my curmudgeonly self will get over the firing pin block, too.

The barrel is a standard-ramped one, with a regular bushing (well-fitted) and an original recoil spring assembly. No coned barrels, no ramped

chambers, no full-length recoil spring guide rods. Just a well-fitted 1911 the way John Moses Browning intended it. (Well, there's that light rail.) The advantage of a standard bushing and recoil spring system is that you can take it apart for cleaning with your bare hands. No need for a secret tool (bent paperclip) or special disassembly gizmos. Tools make it easier, sure. But you aren't stuck if you don't have them. The GSR barrel bushings were snug and didn't have any play, but they could be rotated for disassembly with one's fingers.

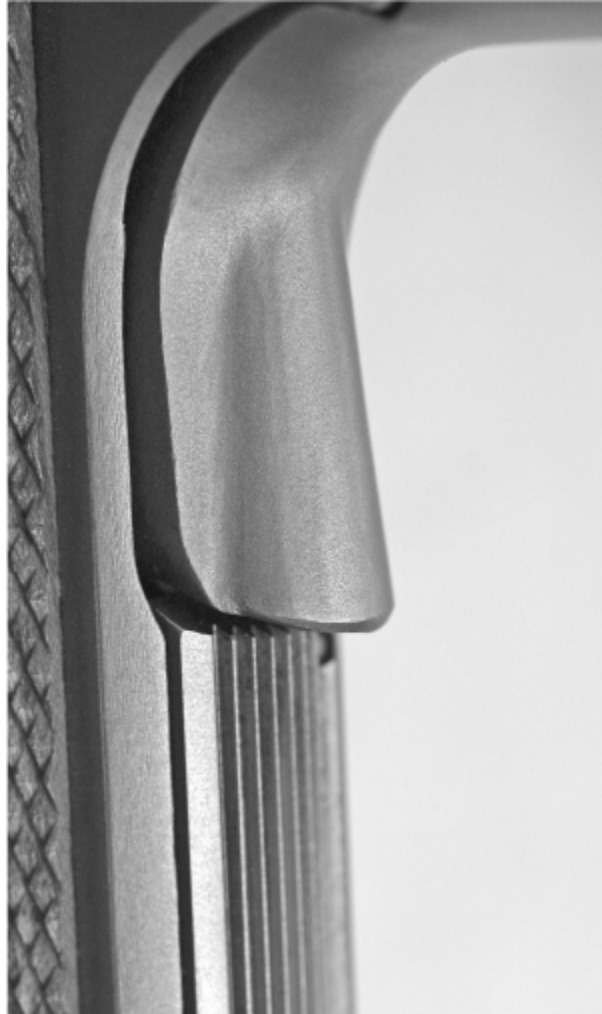
The light rail is a perfect place to latch on a tactical light like a Streamlight M-6 or a Surefire X-200. If you plan to holster the Sig with the light attached you'd better get the proper holster. If not, then you'll need a carrier for the light. Many holster makers can take care of you either way. As a bonus the rail adds a few ounces of weight right where it can do the most good: out front and under the bore axis. If you plan to carry it and can pack the weight, great. However, you should be aware that some competition rules may bar a GSR from certain equipment-defined categories. Check the rules on-line before driving to a match. One is the IDPA CDP Division, and the other is the new USPSA single Stack Division. Both disallow guns with accessory rails. I imagine the Single Stack Classic would bar it, too.

The grip, frame and grip safety area also came in for some selective sculpting. The frontstrap is grooved, the grips a bit narrow, and the grip safety has a central spine to ensure it is fully depressed. The sum of those changes is to make the Sig feel a bit flatter and longer than your garden-variety 1911. I like it. Many shooters like to make a pistol bigger in the grips, fatter or rounder. I love the indexing I get with the flat, almost rectangular grip on a 1911. Thin grips are better for me, and the Sig is more so flat than a standard pistol.

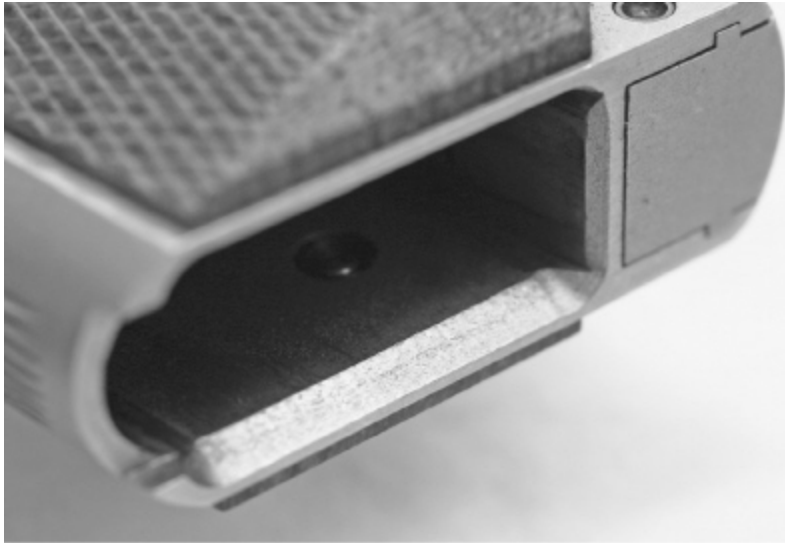
In the lockable case with each of the GSRs that Paul Erhardt was so kind to send me were a pair of Novak magazines. Made to the exacting demands of Wayne Novak, I'm starting to see them more and more. Some other pistols besides the GSRs have showed up on my doorstep with a Novak mag or two included. The baseplate of the mags is sculpted to blend with the looks of the GSR, or other 1911s with mag funnels attached.



The three-hole trigger, and standard mag catch.



The grip safety with central spine is very much a Chip McCormick design.



Beveled mag well, check.

For a while after their unveiling, GSRs were a bit hard to come by. Once they were certain that shooters would accept the idea of Sig making 1911s, Sig planned to do more and more of the machining themselves. When I last talked to Paul Erhardt, he regaled me with the work it takes to get five-axis CNC milling centers to work smoothly, efficiently and produce parts with the quality Sig expects. Yes, getting CNC machines properly programmed is a relatively simple operation in this day and age, but Sig isn't simply modifying cutter paths used on the slides of 220s, 226 and the rest of their double-action pistols. They had to calculate cutter paths from scratch, adjust, refine and measure as they went. But it didn't take long, and soon after there were plenty of Sig GSRs in the pipeline, ready for your shooting, to include commander-sized and officers sized pistols. The frames are made from billet, the slides form forgings, just in case anyone out there had to know, and has a preference. Me, I've long since stopped caring. If the company has found a way to file them out of chunks of steel by hand, great. As long as they are reliable, durable and cost-competitive.

One subject of question concerns the trigger. Sig makes double-action pistols, how were they going to get a handle on the single-action mechanism of the 1911? Without any hassles, as far as I can tell. The trigger pull of the two guns were each clean, crisp and in the four and a half pound range. If you want something lighter, there are many custom gunsmiths who can tune it down for you. But for general use, we're all well-served by

triggers such as these. In the Defensive Use Chapter, I mention that trigger pulls would not be “competition light” in my department. The Sig GSRs are perfect: the departmental armorer would simply have to bump them up to five pounds, and he’d be done.

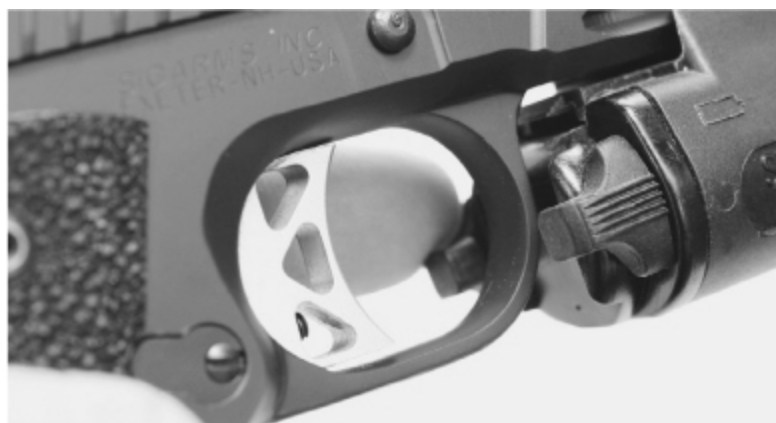
But how do they shoot? Quite nicely, thank you. I fired a few magazines through both the stainless and the blued GSRs to get a feel for them and to make sure they worked 100%. They both did. I next clamped them in the Ransom rest to see what kind of accuracy I could expect. Not surprisingly, they shot quite well. Of the two, the blued gun shot a bit better. I do not think that it shot better than the stainless due to the steel of its composition. I think it just happened to be the better of the two. As the margin of difference was quite small, it hardly matters. But groups right around two inches at twenty-five yards was the norm. Feeding them Hornady XTP 200 grain factory ammo delivered a number of groups clustering in the one-inch range. Definite keepers. I also chronographed the ammo tested, and found that the two Sigs posted velocities above the average of the guns along that day. In some cases they shot a bit more than 40 feet per second faster with the same ammo, compared to other 5-inch Government Model pistols. It may be that Sig makes better barrels, or that these barrels were the fastest of the production lot. It does point out the need to own a chronograph if you’re going to reload.

Once the preliminaries were out of the way, the real work began. Rather than subject myself to shooting both, I tossed a coin. The blued gun won. I then took it along on subsequent range trips, always putting at least a couple of hundred rounds through it. During the several months of testing, I did not clean the GSR. I simply zipped it back into the soft case I kept on the standard range gear shelf. Each range trip, I’d put the case and at least four more boxes of ammo in the stack, load the truck, and be off. At some time during each range trip, usually as a break from one task or another, I’d load up the mags and fire the ammo on hand through the GSR. Most of the endurance-test ammo was Black Hills 230 fmj, with an occasional box of 185 jhp tossed in. Once while loading up for yet another range trip, I came across a bin of bowling pin practice ammo. Back when Second Chance was the match to shoot, I attended religiously. Each Spring would call for vast amounts of practice ammo, ammo loaded during the cold Michigan winters.

One practice load I settled on was a lead 230-grain round nose over a stout charge of WW-231. (I prefer not to mention how much, as it exceeds the max in loading manuals.) It has plenty of power, was accurate enough for practice, and was very dirty. A single practice session in the old days would lead to a hard-chromed gun looking distinctly smokey. Since I'm not shooting pins much any more, and we wanted to see how the GSR held up, I shifted to the pin loads. In a few trips the GSR looked like I had been loading it with black powder. It became impressively grubby. And yet never failed. Once it was gone, I switched back to Black Hills, not bothering to clean or lubricate at the change. During the test Armscor shipped a large amount of ammo to me, and I added their 230 jrn load to the mix. With a power factor in the 193 range it was definitely not powder-puff ammo. And it all functioned 100 percent



The blue GSR with an Insight/Streamlight M3 installed.



Use the tip of a finger (or thumb) to move the light switch on or off.



You can have your GSR stainless or blue. As soon as they finish setting up the five-axis milling stations, you'll have even more options.



And after 4,200 rounds it still shoots like this! No big surprise there, eh?

In all, I ended up putting a bit more than 4,200 rounds through the blued GSR in less than three months, without cleaning. During the labors of hauling it to the range, loading, shooting and picking up the brass I didn't track accuracy. I figured there wasn't going to be any change, and trying to determine accuracy as I went would simply add to the large amount of work I had to take care of. (I can see that some of you aren't buying the "poor, overworked gun writer" ploy. You're right, it is a blast.) No, really. 4,200 rounds is not a large enough database to track accuracy changes. Especially when it was being fed a variety of ammunition. A truly scientific test would have ten thousand rounds of the same ammo, with regular Ransom rest tests at each 1,000-round interval. As I had neither 10K of ammo to test, nor the time and energy to do so, I didn't comport with the rigors of the scientific method.

After I exhausted the Black Hills and Armscor ammo I had set aside for this part of the test, I scrubbed the GSR, lubed and reassembled it, and put it back into the Ransom rest. I might well have saved myself the hassle. Accuracy was just as good as in the beginning. We should expect no less, as

a properly maintained 1911 of top quality (which this is) should have no noticeable change in accuracy before ten times as much ammo has gone downrange. And as with this one, no malfunctions in that time, either. The old standard of “not more than one malfunction per thousand rounds” is long in the past. GSR number 503 went four times that, without cleaning, and never gave me a problem.

Ok, if the Sig is so tough, why didn't I include it in the mud & dust tests? Because Paul Erhardt asked me not to, that's why. Not because he was afraid they wouldn't pass. But because he only had a few loaners at the time I was testing these guns. He couldn't have one of them out of the rotation (shipping to other gun writers) while the assemblers were trying to buff the scratches out of the surface. He needn't have worried, as the guns I did end up testing showed hardly any wear at all. But, as I've said on more than one occasion “If we knew what we were doing, it wouldn't be research.” I'll probably end up doing the mud and dust tests all over again with a new crop of guns, come Volume 3.

With the embarrassment of riches we have in the crowded 1911 market, why buy a Sig? I don't know, because it is durable, accurate, looks good and works reliably? I mean, if that isn't enough, what more do you want?

STI



Dave Skinner, shooting at the 2005 USPSA Nationals.

STI is Dave Skinner. The history of the plastic-framed, high-capacity 1911 is interesting. Basically, back in the very early 1990s, Chip McCormick, Sandy Strayer, Mike Voigt and a rotating cast of characters got into and out of the business of making advanced 1911 pistols. Once it all got shaken out, Dave was head of STI, Sandy SVI, Mike and Chip were off doing other things, and everyone just got on with their lives. (Back then, it was the firearms equivalent of a soap opera.)

What separates Dave from many other head honchos at firearms makers is that he shoots in the matches. He talks to shooters. He will build almost anything. And using CNC machines allows him the freedom to make some really wild stuff. For instance, at the 2005 USPSA Nationals I was looking over his table full of guns, and spotted a strange one: he had made a full dust-cover Government Model in 9mm. A honking big, heavy, 9mm pistol that held only nine rounds. No compensator, no optics, no future in USPSA shooting. “Dave, why?” I asked him. “Simple, it makes the grade as a Service Pistol for PPC shooters.” Now consider how small the market segment has to be for police officers shooting Service Pistol who aren’t

locked into the departmental-issue sidearm. And Dave makes a gun for them. He also makes a bigger 9mm with click range-adjustable sights for those PPC shooters who are shooting in Open and not Service Pistol. Dave and I found we had another link besides a fondness for 1911 pistols: we both have worked in some of the strangest professions. We came closest to each other in the fringes of the criminal justice system. He used to be a bail bondsman, and I used to repo cars. The gun industry is almost a secret society in the strangest ways.



A heavy-frame 9mm 1911, for “Service” competition in PPC. Who else makes such a beast?

The polymer-framed guns in .38 Super for Open were the big thing for 10 years or so, with Limited guns (.40, no comp, no optics) creeping up. But the options CNC and the modular frame allow, let him make some others. And then Dave bought Lone Star, a single-stack 1911 maker. Dave sent me a pair of guns, a Tactical Lite and a Duty One. First the interesting modular guns.

Lightweight Tactical

What would you feel about a hi-cap gun in a hot caliber, that was compact, easy to carry, held lots of ammo, was ultra-reliable, and had an accessory rail for your tactical light? Would you love it? Then see about getting your hands on an STI Tactical Lite. The TL comes with an

aluminum frame between the polymer mag holder and the slide. The aluminum pares a few ounces off the weight. The hi-cap frame gets you a flush magazine that holds sixteen rounds. If you go with a 140mm mag tube on the reload, you've now got 18 in the mag. And that is before any tuning such as what Dave Dawson can do. If the huge mag funnel is too large, then you can take it off and run the gun without it.



A six-inch barrel, tri-set sights, and heavy frame, for Open PPC competition.

The sights are fixed, although you can order adjustable if you want. The barrel is coned, and tightly fitted. Dave and the crew are used to making barrels fit for persnickety competition shooters, so you would be hard-pressed to complain about the accuracy.

The one sent me barely escaped the clutches of my test-fire crew. We spent an afternoon sending a large variety of 40 ammo downrange. The end result was a lot of .40 brass to pick up, and a paltry list of shortcomings. Primary of which, none of them owned that particular gun. As a

competition gun, they'd want it either heavier, larger or with adjustable sights. But as a carry gun, they all felt it was a hot ticket.

Not everyone can use a .45. Some departments don't allow it. Some even mandate a particular caliber and load. (Detroit, for instance requires use of .40 S&W with a 180-grain FMJ bullet, perhaps the most over-penetrative combination extant.) The Tactical model Dave sent me is built on the hi-capacity STI frame, with an aluminum rails, commander length, and with a light rail machined into the dustcover. At twenty-nine ounces empty, the Tactical is noticeably lighter than the Duty One. A whole lot lighter than many competition guns, which can easily run over 40 ounces, and some approach 50. With its (now legal) hi-cap magazine, it holds 16 rounds of .40 S&W, 15 in the magazine and one in the chamber. The slide, like that of the Duty One, has a Heinie slant rear, dovetail front and a flat on top. Unlike the Duty One, the Tactical does not have front grasping grooves, and the slide is full profile out to the muzzle. There are no recoil spring tunnel scallops on this slide, giving it a look reminiscent of the original Colt 1900 models. The barrel is a coned, bull barrel with integral feed ramp. While the integral ramp is useful but not always needed in .45, in .40 it is essential. Where the .45 operates at 17K PSI, the .40 operates at twice that pressure. A weak case from a commercial reload, or the one in a million over-pressure factory load could blow a .40 case. Those who shoot competitively and reload the .40 are well aware that some of the police-surplus brass they get comes from Glocks. And a lot of what is "found" at the range is tired, the reason it was left. While a blown .45 is cause for gun cleaning and a new magazine, the extra pressure of the .40 often trashes a gun, with few salvageable parts. Underneath the barrel, the slide reciprocates via a Recoilmaster recoil spring, dual-spring assembly. The extractor is a standard 1911.

While the Tactical is lighter than the Duty One, the extra weight of the slide puts the balance forward of where it would otherwise be. The thumb safety is an ambi, and on this design I have no problems with it banging against my knuckle. The hi-cap frames sit just enough differently in my hand that the safety bump issue I have with single-stack guns doesn't exist. The grip safety is the standard STI unit, with knuckle scallops and speed bump. The frame on the grips and magazine portion is a synthetic unit

bolted to the aluminum frame rails and barrel cut section. The grip has cast-in checkering, while the aluminum mainspring housing has machined checkering.

The Tactical Lite comes in 9mm, .40 or .45, your choice of plain, fiber optic or tritium night sights, and the same black polymer coat finish on the slide and type II anodizing on the frame that everyone else gets. You can get a commander or a government length slide. As to the choice of calibers, for once I'd be at an impasse. In a single-stack the difference between a .45 and .40 is minimal: one round. But in a hi-cap you can get more in the mag with a .40 than a .45. The range is generally 13 to 15 rounds for .45, and 16 to 18 in .40 that can make a difference. For the rare instance where an STI would be allowed, but a 9mm mandated, I'd have no problems stuffing a Tactical Lite in 9mm in my holster. Of course it would have the excellent Cor-bon 125+P JHP loaded, too. That load rarely makes Major in most guns, and does make Major in some. That's right, Major. In my Novak/Bar-sto Browning Hi-Power (the fastest compact 9mm barrel I've ever chrono'd) it posts a 168PF.

At the bottom of the frame we run into the one feature most likely to bring howls of outrage to the tactical set: a magazine funnel. "Not kosher" some would say, and others would object to it on the grounds that it can't be concealed. On the other hand, I have talked to officers on raids who expended all the ammunition in their weapon, and had to reload. At the moment they needed a reload, anything that would have made it faster and more certain would have been welcomed. If you really have to conceal it, then take it off. All you need do is drift out the mainspring housing pin, remove the funnel, and replace the pin with a standard-length pin. Done. Considering the amount of gear an entry officer already has, and the bulkiness of it all, a magazine funnel isn't going to be noticed. Nor likely to get hung up on a door or window. Take a look sometimes at the geared-up SWAT cops you see, or photos from Iraq of teams doing entries. With all the gear they've got on, who's going to notice a mag funnel? And I find that the magazine funnel is well-positioned to act as a brace against the bottom edges of my hands.

With a pair of nomex gloves on the Tactical (or any STI with a funnel) is practically locked to my hands, and doesn't go anywhere under recoil.



The tri-set sights, for precise adjustment between distances.

Recoil is what you're going to get, if you feed this lightweight blaster top-end ammo. While standard practice reloaded ammo, or factory hardball was sedate, the hotter stuff was quite a handful. The new Cor-bon Powrball comes back right smart into your hands, but is easy to control once you realize it isn't going to hurt. (I've shot handguns that hurt to fire. Fun is fun, but those weren't.) As for accuracy, the Tactical matched its bigger brother for groups. I found it easy to punch two inch groups with it, and when the force was with me and the wind wasn't making the target stand dance, I could get groups down almost to an inch in size. It never failed to work with any ammo I had along on several range trips, a collection of hardball, hollow-points and soft-points. The Recoilmaster dual-spring recoil system does a good job of soaking up the recoil generated by hot loads, and you might be fooled by how soft the standard loads feel: you may think you've got some wimpy practice ammo instead of the full-power stuff. The now-standard magazines will hold fifteen rounds of .40 S&W. If you send them off to a wizard like Dave Dawson, he can tune and adjust them to hold seventeen rounds. If you go up in size from the flush-fit 126mm magazines to USPSA Limited class 140mm magazines, you can have tuned magazines that will hold nineteen or twenty rounds. In other calibers, the flush magazines will hold eighteen rounds of 9mm/.38 Super, or thirteen rounds of .45. Again, with tuning you can get one or two more.



Not “tactical?” who says? The mag funnel locks my hands to the frame, and the funnel is compact compared to the other gear on a SWAT or military operation.



On all STI modular 1911s, the polymer lower bolts to the metal rail section of the frame.



The Tactical Lite came with an ambi safety that I could use.

But what are they for, and how can you carry them? The simple answer is that they are for shooters who feel the need to have a light rail option. For tactical use, or uniform carry where the department allows single action pistols, either of these and a tactical light would be very useful. While it may be a bit of a struggle to find a duty holster that fits one of these, fits departmental holster regs, and looks good, tactical officers have no such problems. (A duty holster will almost certainly have the light off the sidearm when carried, a tactical operation will have the light on the weapon.) London Bridge Trading Company makes a thigh rig for light-mounted sidearms. Either would fit, no problem. And if you wanted to carry with the light someplace else, any holster they makes would hold these sans light. Blackhawk also makes holsters to fit either light-mounted or light-off/railed sidearms.

For those looking for a competition gun, you'd be hard-pressed to find one better out of the box. Now, you won't be allowed to use either of these in an IDPA match, but no one will give you a second look (unless you've practiced, and are doing well) shooting one of these at a USPSA/IPSC match. For pins, steel, and just impressing the heck out of the guys at the local club during the monthly match, an STI tactical gun goes a long way.

The “Duty One” is an all-steel single-stack in .45 with a light rail dustcover. At 39 ounces, it is not the heaviest government-sized 1911 I’ve weighed. The light rail adds a bit of weight, but not enough to make it heavy, and the weight is added out front and under the slide, where it can do the most good in dampening felt recoil. From the top, the slide has a Heinie slant sight rear, and a dovetail front in the Novak pattern. As a nice touch, the front sight is locked in place with a small setscrew. I’m sure if you feel the need you can have the sights in whatever night sight configuration you find most useful. (Dave is very accommodating that way. What you want, he’ll endeavor to build.) The slide is flat-topped, and has cocking serrations front and rear. The ejection port is lowered and flared in the standard and distinctive STI style. The barrel is a coned bull barrel, with the STI Recoilmaster dual spring recoil system installed to cycle the slide. The barrel is ramped, to provide complete case support, so you can use even .45 ACP+P loads without needing to worry about blowing a case. (In a more likely situation, the ramped barrel provides extra support to the cases used in reloaded practice ammo. You’re more likely to run into a blown case with “budget” or “brother-in-law” reloads than any factory ammo.) The extractor is a standard design, just like John Moses Browning made them in 1911. In 30-plus years of 1911 shooting, I think I’ve broken one extractor, maybe. I can’t remember if it was broken or just chipped, and if I found it while doing routine maintenance, or if it caused a problem. In any case, I don’t get all fluttery over the prospect of standard extractors causing me problems.

The frame is where the real action on the Duty One. The dustcover is lengthened, and machined to be a light mount. Or laser mount. Or if you have Dave Skinner’s weird sense of humor, a bayonet mount. Yes, he made a bayonet to fit the mount, just to be sure of getting people’s attention at trade shows and the like. No, he doesn’t make them, but I’m sure if enough people ask he’ll figure out a price. He won an award at the 2003 SHOT show with that bayonet. Even if he hadn’t, he would have had a blast watching people do doubletakes when seeing it. The longer dust cover adds a bit of weight, but probably only a couple of ounces. (It is difficult to get a hard and fast weight difference, as minor differences in other dimensions can affect gross frame weight.) The dustcover is also beefed up. To make

sure the cover doesn't crack with the weight of a light, the frame is made slightly wider, the radius of the frame at the dustcover is squared, and the bottom of the dustcover is a bit lower than standard. To fit standard parts to the slightly thicker frame, STI has recessed the locations for the slide stop lever and safeties. The trigger guard is squared, but that is more cosmetic than anything else, to match the squared trigger guard of the polymer-framed STI models. You could have a gunsmith checker the front of the triggerguard if you wanted, but it has been a long time since that was a hot IPSC "must-have" item. Me, I'd be tempted to go the other way, and have my gunsmith sculpt the trigger guard to a standard profile, and make it less boxy.



All steel, checkered and with a lifted frontstrap.

One detail that you won't see on those older guns with checkered triggerguards is a raised radius behind the triggerguard. Being able to get your second finger a bit higher on the frame is one of those minor details of a competition gun that can pay big dividends. To see it on a production gun is a good thing. STI has done a good job of blending the various curves. That, and the excellent checkering provides a secure and non-slip grip. The front is done in 40 lpi, while the flat mainspring housing is done in 30 lpi checkering. Sharp, clean, and with no flats or over-runs, the checkering is

first-class. No need to have your gunsmith clean it up or “improve” it unless you are really, really picky.

The safeties are an ambi for the thumb safety, with a reduced paddle on the right side. I have a particular problem with ambi safeties, in that my grip is very high on the gun, and most ambi safeties bind against the first knuckle of my right hand. The STI is reduced enough to clear, but just barely. People with normal hands won’t have a problem. Mne, I’d be tempted to have the right side of the ambi safety shaved down a bit. The grip safety is a high-ride that looks very Ed Brown-ish, with thumb-knuckle clearance scallops. The bottom of it has a speed bump, to ensure you get the safety off when you need it. The Duty One shipped was blued carbon steel. You can have it with adjustable sights, or night sights, you can have an oversized magazine release, and that’s about it. What you’ll get for your \$1,800 is a single-stack as solid as an anvil, and you’ll have to add on your own the “must-have” goodies that make your heart sing. (I can’t think of any right now.)



The Duty One. An all-steel 1911 built to last forever.



The Heinie sights are a nice touch.



Your basic premium grip safety with speed bump, and ambi safety.

Shipped with the gun was a single magazine from Metalform, the obligatory instruction book, a disassembly tool to take the recoil spring out, all in a lockable plastic box. Not included was the now-ubiquitous fired case. I don't know if Dave doesn't ship to places requiring cases, or since it was going to a gun writer he simply didn't bother. Knowing Dave, it could be either.

When it came to reliability testing, I could have phoned in the results. Were I the type to find range time boring I would have been bored by the testing. I hauled a selection of ammo along, factory hardball and hollow-points, some factory lead, a bunch of reloads, and a box marked “misc.” The Duty One gobbled up everything I had, including the miscellaneous box. Lest you think I’m feeding an expensive loner gun garbage ammo, the miscellaneous box is range pickups from law enforcement classes. Invariably, when we go to clean up the range, there is loose ammo lying with the brass. (I run a clean range, we always police brass.) The ammo is always factory, as the price for State Bid ammo where I teach is so low no one bothers to bring reloads. But no one is too keen on mixing Remington with Winchester, hardball with hollow-points, when their department mandates one or the other. Rather than present the brass mill with a problem, we sort the live stuff out. That is the “misc” box. I undertake the onerous chore of disposing of the miscellaneous ammo. One load I was particularly interested in was the old Speer 200 hollow-point load. Back in The Day, when we were shooting lots of bowling pins, the Speer 200 hollow-point over 6.3 grains of WW-231 was the load of choice. But I have heard from some using their dwindling supply (Speer no longer makes the bullet, the machine finally wore out after twenty years of producing bullets) that the load was not always reliable in a ramped-barrel gun. Not so the Duty One. I wasn’t willing to do more than a couple of hundred rounds (my supply is not vast) but it fed those just fine.

As for accuracy, the Duty One has plenty. I shot it over sandbags at 15 yards. (I would have done so at 25, but all the ranges were set up for a match the day I had to do accuracy testing, and I didn’t want to move anything and cause problems for the Chief Range Officer.) At that distance the Duty One would easily shoot one to 2-inch groups, which is about what I can do when I’m full of caffeine and after hauling my gear down from the parking lot. While more accuracy is better, you could easily find a tack-driving load from the factory for defense, duty or qualification. Once again, the Oregon Trails 200-grain lead bullet and Vhitavuori 310 load was the most accurate. I’m convinced that if you have a gun that won’t shoot accurately with anything else, it will shoot with this load. And if it doesn’t shoot with this load, it needs some work.

After accuracy testing I spent a relaxing afternoon hammering the plate rack, our various pepper poppers, and trying a few drills. At no time did the Duty One give me the slightest problem. The test-fire group also had a time with the Duty One. They found it everything you'd want a 1911 to be and then some. So much so that one of them wanted it. He called STI and negotiated a price for it, and once his check cleared I transferred it to his gunsmith for further work. What, I can't imagine, but knowing Roy there has to be something he feels needs improving.



Carina Randolph-Burns is a serious USPSA/IPSC competitor, and she uses STI. And uses them well, too. Here she shows proper follow-through on her second shot.



If you need something to walk the mean streets with, the Duty One will fit the bill.

SVI-Infinity

SVI is Sandy Strayer. And his son Brandon. They have a crew of dedicated machinists and gunsmiths who build guns. They build guns to order. You cannot say about an SVI “this is the standard XYZ model” for each is built to spec. As a result, it makes life for a struggling gun writer just a bit difficult. Which custom order do I use as the test gun? What could be considered the “standard” Infinity pistol? The solution was simple, Brandon sent me a gun being built up for one of the shooters on the SVI team; Dave Uchida. I finally ran into Dave at the 2005 USPSA Nationals. His was a name I’d heard for many years, and when we were introduced I realized that I’d seen him at various matches but had never heard his name while he was on the scene. What I found out from Dave was that while this was “his gun” he hadn’t seen it yet, Brandon had sent it right to me for the book, and once I was done Dave would get a chance to work on it and set it up the way he wanted it to be. Which wasn’t far from what it is, just a bit of fine-tuning.

The gun shipped is a single-stack .40 with all the competitive bells and whistles. SVI is perhaps more famous for their hi-cap frames and guns, used in USPSA/IPSC competition, but the single-stack gun has become quite a hot commodity, what with Limited 10 and the new Single-stack Division starting up. When it comes to options on an Infinity pistol it can become overwhelming: You can order whatever or whichever you want. The slide itself on the supplied gun is a work of art. The top is scalloped into a serrated rib. Eight grooves run the length of the slide, and then the rib is sculpted down to the slide flats. There are cocking serrations fore and aft. The front sight is a transverse dovetail set in the grooves. On the left flat the “Infinity” logo is machined large and centered. The right has it lower, under the ejection port. The rear cocking serrations have a recessed flat in front of them, to bring the apparent height of the serrations up. The rear sight is a Bo-mar. Inside, the recoil spring guide rod lacks a buffer pad. As competition shooters are even more willing to argue the subject of buffer pads than theology scholars are angels on the head of a pin, SVI simply

ships them with what is asked. Or none at all. The slide has the SVI interchangeable breech-face. Some think it is to allow you to make your gun whatever caliber you desire. The real reason is precision and flexibility. By making all slides the same, and plugging in the needed breechface, they can have lots of partially completed slides on hand, and finish them in whatever caliber and cosmetics the customer wants. Partially completed in that the slides-to-be have the clearance tunnels drilled, the flats surface ground and the magazine clearance channels milled. But none of the cosmetics done nor the slide contoured. If there is a rush on .45s, they can simply plug in those breechfaces, apply the exterior work and ship.



The Infinity 1911 that Brandon sent me. Dave, you lucky son of a gun.



That's Dave on the right, talking about the usual heat of the PASA range with John Flentz, at the USPSA Nationals, 2005.

The barrel has a bushing, and a one-piece full-length guide rod. It is integrally ramped, for maximum case support, something many competitive shooters do when shooting a .40. The .40 normally runs at the same pressure as the 9mm Parabellum, 34,000PSI. When loaded with a heavy bullet and fast-burning powders (for the softest possible felt recoil) the performance envelope of the cartridge is entirely used. As in, anything that goes wrong puts you “out of the envelope” and into trouble. The slightest bullet setback on feeding can spike pressure. A slightly overweight bullet, a hot day, a hotter than normal primer, a heavier than normal powder charge, all can put you over the pressure line. Get two or three at once and you can bulge or blow a case. A supported chamber gives you a little bit of breathing room.

The slide stop is at first glance normal, but a close inspection reveals that several surfaces have been re-sculpted in design, and the result is a lot racier than the original. The thumb safety is a competition one, pure and

simple. And the safety is also a demonstration of why you custom-order a gun only after you know exactly what you want. The ambi safety on this gun is one I can't use. (Not SVI nor Dave's fault, it is my hand and my grip.) I'm sure Dave can use it, and most of my testers could too. But the right-side paddle sticks out too far for my hand. My knuckle gets in the way. If I don't move my hand, I can't push the safety off. If I move my hand, but keep my thumb over the safety, I lose contact with the grip safety and the gun won't fire. I have to get my hand off the safety to shoot it. But as a custom gun for an individual, I'm sure it works great for Dave. Were it mine, I'd have had Brandon shave the right paddle down. When I mentioned that to Brandon at the Nationals, he said "Go ahead. I can make it pretty afterwards. Dave might not even notice." I think he was trying to have some fun at Dave's expense, but Dave didn't even notice.



A lowered ejection port, the Infinity logo, and even custom serial numbers if you want them.



The Infinity slide stop, and the fit of the grips to the plunger.



The ambi safety that I simply could not shoot. My fault, not the guns.

The trigger guard is squared and checkered on the front. Definitely old-school, and not for me. I tried flat and checkered trigger guards 20-plus years ago, and they didn't work then. But those who do find they work love them. And you can get them at SVI. What does work for me is the radically lifted frontstrap. The curve behind the triggerguard is lifted so much it actually goes up from the bottom line of the guard. I'm not sure you can get your hand any higher on a 1911 frame. The trigger is the SVI

interchangeable unit. The front half of the trigger face comes off (when the trigger is out of the frame) and you can change it for something longer, shorter, flatter, curved differently, or even to a blank that you custom-cut and fit. Again, it is easier to have a standard bow and base, and a bunch of replacement faces, to arrive at twenty choices of trigger length and contour.

The frontstrap is beautifully checkered, thirty lines to the inch. The frontstrap radius is left larger than that of the interior mag tunnel, so the effect is somewhat squarish. (Sort of like the older generations of Springfield armory frames.) The effect is to create a definite end to the checkering. Unlike frames that have matching contours in and out, the edge of the frontstrap, when it meets the frame flats, ends. The checkering thus ends, and the shoulder of checkering that ending creates acts to grip your hand even more than the checkering alone would. The grips are a bit fat for my tastes, creating a more rounded gripping area than I like. However several of my testers love fatter grips, and could not stop talking about how much they liked the feel. Which again underscores the need to know what you like and what you shoot well when ordering a custom gun. Grips are easy to change, however, and were this pistol staying with me it would be an easy thing to swap them out. The grip screws are allen-head screws with a decorative knurled border.

Back of the grips, the grip safety is a beautifully fitted and polished Ed brown. Would-be gunsmiths take note of the fit of this safety: You can see the line, but you can't get a fingernail to catch on the gap. The gap is a bit larger on the right side, where the spring is levering the grip safety and the tolerance of the safety and the shaft allow it to tilt very slightly.

The mainspring housing is flat and checkered, and again an example for aspiring gunsmiths. The checkering is perfect. As in each line dead straight, evenly cut and all the points pointed.

At the bottom is one of the biggest magazine funnels I have seen. It is so large it almost looks like it belongs on a hi-cap frame. Made of stainless steel, the exterior contour of the funnel comes over the bottom of the grips. It is blended to the frame such that you can't get a fingernail to catch, except at the front where it is recessed for the magazine baseplate toe. The front of the mag funnel acts as a wedge against the bottom finger of your left hand (right for the southpaws among us) and locks your grip in place.

For super-speed shooting, that wedge is one more lever for your hand against the movement of recoil.

The trigger pull on the gun was surprising. As in, a competition gun sent with a trigger pull around three pounds. It is quite common for top-flight competition shooters to be using triggers under two pounds. I know of Grandmasters who shoot guns with trigger pulls of a pound and a half. I don't know if Brandon plans to do more trigger tuning once I send this gun back, or if that is the way Dave plans to shoot it. But even at three, the trigger pull is clean and crisp.

How does it shoot? Quite well indeed. I could not get much of a feel of it at speed, due to the mis-match between my hand and the thumb safety. (I couldn't bring myself to grind on a loaner gun.) I was able to do some drills, and run a few standard tests, but without being able to get and keep my thumb over the safety, such standard tests as El Presidente or a Bill Drill just weren't at my maximum speed. Those of my test crew who could shoot with the safety found it quite enjoyable. Indeed, they cleaned me out of .40 S&W ammo on the first range session. Luckily I had lots more at home, but they shot all that was in the truck in short order, they liked the Infinity so much. Why .40? Why not make a single-stack in .45? (Infinity will make it in .45 if you want.) For many competitive shooters the answer is simple: ammunition. If they are already set up to load .40, and have a ton of components and lots of data in their log book on how to load it and what it feels like, why change? Some argue that the felt recoil of the .40 is superior to the .45, at least competitively. They point to diminished torque, differing slide velocities due to a smaller breechface thrust, or lighter bullets. The truth is, you could tune a .40 and a .45 so they felt so much the same you couldn't tell the difference unless you looked at the barrel markings. The common .40 competition load for IPSC is a 180-grain bullet that make Major, a threshold velocity of 917 fps. The closest .45 bullet in weight is 185 grains, with a threshold velocity of 892 fps. Given identical guns with the same springs, who could tell the difference in a blind test? The feel of a given guns recoil is going to be discernable more on things like spring weight and length, the number, thickness and durometer of the buffers inside, and even the powder used, than it will on .40 vs. .45. But the matter of reloading tools on hand and components available and know matters a

great deal. So while many will immediately go with a .45 in a single-stack gun, there are a number of shooters for whom it makes sense to select (or stick with) a .40.



The Infinity triggers are user-changeable in length. Take it apart, swap the front of the bow for a different length.



The mag funnel, which swallows the magazines.



Here the safety in the up position, before it crashes into my knuckle. (I'm already touching the underside of it.)



The frontstrap is so lifted, it actually comes up behind the trigger guard.



Strong-hand only, no wedging. But freestyle is another matter.



The polished and fitted grip safety, with speed bump at the bottom.

One new “goodie” that you can get from Infinity (and only from Infinity) is the Sightracker barrel. The barrel is simple: take a Scheumann hybrid port barrel, and don’t cut the ports. Mount a front sight on it, and shoot it. The sight moves less in your field of view, as it is not riding on the slide shuttling back and forth. Some like it. Some don’t. Some don’t see a

difference. Taran Butler, USPSA Grandmaster, tells me that once you've wrung all the other aspects of speed and accuracy out of your shooting, the Sightracker is good for a few percentage points more. If you haven't, you'll never notice it. So, you won't become a Grandmaster simply by owning one, but once you're there it might edge you past a GM who doesn't have it. Sounds good to me. To install the barrel requires the center of your slide be slotted to clear the barrel spine.

When it comes to accuracy I have to expand my vocabulary. I have called a number of other pistols tested "tack-drivers." That won't do for this one. To call this a tack-driver would be to insinuate that it is as accurate as all the others are. It isn't. The most accurate pistol I have on hand is my Caspian Race Ready that Doug Jones did the barrel fitting on. That gun, with its favorite load, will commonly shoot groups under an inch from the Ransom rest. Others loads it shoots well, just not as spectacularly well. I can feed it factory or reloaded 230 hardball all day long and get groups in the inch and a half to two inches range. The Infinity is scary. Once I pried the mag funnel and grips off (It wouldn't fit in the Ransom inserts with the mag funnel on. It didn't even come close.) I set it up and started shooting settling groups. Quite often a pistol needs a few groups to settle into the inserts and start producing tight groups. The first shot was out of the group, and the next five in a tight cloverleaf. I had a momentary thought that this was going to be a "four and one" gun. Some 1911s, especially those built in earlier eras, would fire the first, hand-chambered round to a different point of impact than the subsequent rounds. Much less common today, it drove bullseye shooters of yore absolutely crazy. This pistol did not suffer that problem. After the first shot, no bullet struck more than an inch from the center of the aggregate group center. Switching from lead to jacketed bullets shifted the group center a bit, but the groups were eerily small. Group after group of one inch or a bit less is not something even I am accustomed to seeing. As I have mentioned before, I don't edit groups. I don't throw out the "obvious" flyer. I don't take the best three of four groups, or best four of five, as the guns "average." What I shot is what I report. The only 1911 I've ever seen that did something like this was the AMT from the first book. That gun shot group after group under two inches. Like an idiot I sent that gun back, and when AMT went out of

business again, that gun disappeared to who knows where. I wish I still had it.

This gun will not go to a location or owner unknown. It goes back to SVI. After Brandon and the crew have cleaned my fingerprints off, mopped the drool off and made sure all the parts are properly attached, it goes to Dave Uchida. Dave, you lucky son of a gun.



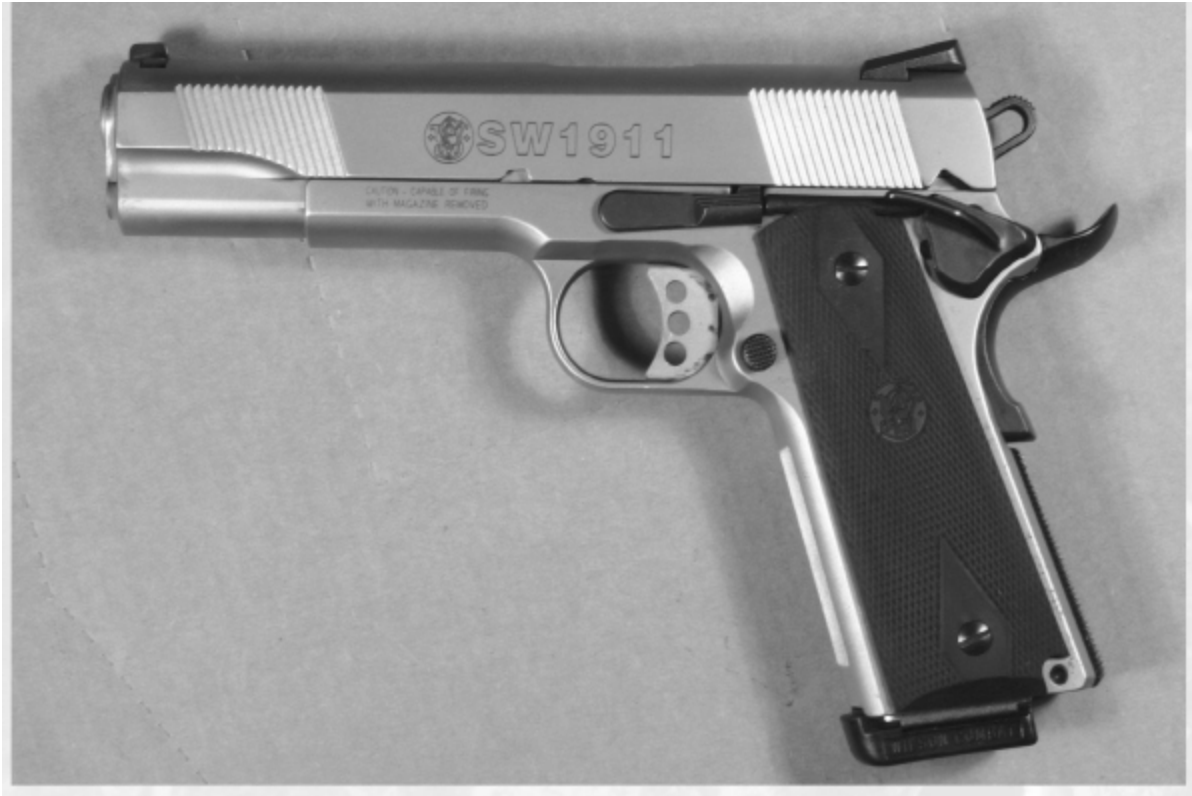
Infinity makes Open guns, too. Here Lisa Munson is shooting a hi-cap .38 super Open gun.

Smith & Wesson

The saga of the 1911 has had many twists and turns and many surprises. The biggest one of late was the entry of Smith & Wesson into the 1911 manufacturers' fold. Yes, the stellar American firearms makers, predated in the business only by Remington and Colt, decided to begin making 1911s. For years S&W had tried to avoid biting the bullet. They had scaled up the Model 39/59 pistols to .45, and produced the 645. They had then massaged it until they had as close a clone as you could get to the 1911, and still have something that started out life as an S&W pistol, the 945. But as good a pistol as the 945 is, it isn't a 1911. (I know, I tested one for *Gun Digest Book of S&W*.)

It was a well-known secret in the firearms industry that S&W had been supplying the forgings for several 1911 manufacturers. Forging isn't easy. You can buy or lease a CNC machining station and install it in just about any heated building with power and a solid foundation. You can find machinists, even machinists with programming experience, in any town. If you had a mind, and a two-car garage, you could do all that without ever leaving home. But forging is different. First, the machines are an order of magnitude more expensive than CNC machines. For those of you who are accustomed to the sloppy vernacular usage, an order of magnitude is ten times more. Ten is an order of magnitude over one, and one hundred is likewise over ten. You can fill a gymnasium with CNC machines for the cost of a forging machine. Then you need the ovens, for heating and cooling, and the trained operators. If you want forgings, the least expensive way to get them is to buy them.

S&W has the machines, so they forge parts for other people when they've caught up on their own production. Well, it isn't too far from forging 1911 slides and frames for others, to machining the forgings for yourself. After all, not only does S&W have the forges, they have the CNC machining stations, too. Once they had gotten the bug, and worked out the details, it wasn't that big a leap to making 1911s. So in the course of testing things 1911 related, I of course had to try a couple of S&Ws.



The first SW1911 was a stainless .45 with fixed sights.



Now you can have adjustable sights on your SW1911.

1911 Government

This is a stainless Government Model, with one big difference: an external extractor. Now, for a lot of 1911 manufacturers, an external extractor falls under the heading of “this year’s new thing.” However, S&W has been making auto-loading pistols in 9mm or larger since right after WW II. All of those pistols have had external extractors. For them it was an obvious engineering choice. Why re-learn all the intricacies of manufacturing a 1911 extractor, when they had decades of experience with externals? So the SW1911 got an external extractor.

And stainless, another aspect of firearms manufacturing the S&W had had decades of experience with. They first started offering stainless handguns in the early 1970s, and have had one or another model in the catalog ever since. They have so much experience with stainless that nickel isn’t even offered any more as a finish. Why, when stainless is tougher, has no environmental hazards issues, and can be buffed bright if you so wish?

Additional features to the external extractor were a firing pin safety activated by the grip safety. Your firing grip clamps the safety in, the linkage pushes the plunger out of the way, and the firing pin is free to move forward once the hammer strikes it. No grip, no firing pin movement. The barrel is standard, no ramped barrel.



The external extractor S&W puts on their 1911s.



Standard ramped barrels, and a full-length guide rod.



There's nothing wrong with the fixed sights. They are Novaks, the gold standard of fixed sights.



A scandium-framed lightweight gun that can take lots and lots of ammo. Nothing wrong with that, for sure.



Neither gun faulted with any ammo I had to feed it. I'd bet you'd have to search far and wide to find ammo it won't feed.

The initial SW1911 was one choice: a stainless Government Model. Fixed sights, .45 ACP, a nice pistol but not a market-killer. After all, you could buy a stainless, plain, 1911 from a whole host of manufacturers, why select S&W as your 1911 maker? You mean besides the fact that the guns were reliable, accurate, came without sharp edges, and were actually available? Yes, there were a lot of makers out there who said you could get such a 1911, but in reality not all of them had them in stock, or were even making such a beast. S&W did, and sold a bunch. As a basic, no need to build it, or your basic, hey now I have something to send to my gunsmith, gun, the SW1911 had a lot going for it.

The one they sent me worked like a champ. Its initial introduction was at an LE class, and the officers there were more than happy to put ammo downrange through the brand-new S&W. The first one proved to be such a tack-driver that some of the officers jokingly accused me of bringing a “gun writer’s special” a factory-tuned gun to show off the model, and not a standard production gun. The idea is enough to make any gun writer snort coffee through his nose at the prospect of it. We not only don’t get special guns, we sometimes get used guns that have been sent through the manufacturers PR office to other gun writers, or I suspect, have been through the weekly test-fire endurance test, cleaned up and shipped to us.



Doug Koenig’s personal SW1911.

If you have a chance at an SW1911 at a good price, don’t pass it up “because it isn’t a Colt.” Get over it. S&W now makes 1911s as good or better than Colts. (Would that Colt still made revolvers, and could return the favor.)

Scandium

A rare metal, that when alloyed with aluminum, produces a very hard (for aluminum) and light alloy. Aluminum can be anodized to harden it. However, the anodizing is only a surface hardening, and the core of the part remains soft. If you wear, file or grind the surface and break through the anodizing, you uncover the soft substrate. An anodized part is no stronger than an un-anodized part, it simply has a harder surface. Scandium creates an alloy that is hard all the way through. Now, we're not talking of hard on terms of steel, but certainly a lot harder than aluminum. Where steel has a tensile strength on the order of 180,000 pounds, aluminum is less than a quarter of that. Introducing scandium into aluminum provides a significant increase in strength. How much? I'm not really sure. Scandium is very expensive. Using it is relatively new. How much, and how to use it, is still very much a trade secret, and S&W is not keen on letting others get a leg up without spending the R&D money. No freebies. However, it is a significant amount, nearly doubling the strength of the aluminum.

S&W has been introducing Scandium and Titanium into its various models, and production processes, and now offers a lightweight 1911, of the commander size, using an aluminum/scandium alloy in the frame. Those of us who have been using our Colt Lightweight Commanders, and various build guns on Caspian aluminum and titanium frames now have another choice. A lightweight carry gun from S&W that probably won't crack at the dust cover, as all LWCs that have gotten away shooting have.

Other than the S&W parts, the external extractor and the grip safety firing pin block, the scandium commander is a 1911 lightweight.

Super

OK, some is good, more is better, too much is not enough. The SW1911, both full size and Commander, is available in .38 Super. Why? I can think of two reasons: IDPA and the Bianchi Cup. In IDPA, in ESP Division, you should be shooting a .38 Super or 9mm. You get no extra credit in score for shooting a .45. In the Bianchi Cup, the stock division again gives no extra score for .45. You simply have to exceed the NRA threshold for scoring (a 135PF) and you're in. In both those, a .38 Super

1911 would be (and is) fantastic. And S&W, since they are sponsors of IDPA and the Bianchi Cup (also known as NRA Action Shooting) then they would be remiss if they didn't offer a handgun with which to compete in those venues.



Doug, racing through a stage at the 2005 USPSA Nationals.

Doug Koenig

“Painting the lily, gilding fine gold” is the actual quote from Shakespeare. And as if S&W didn't have enough going for it, they went and got Doug Koenig to consult with them and offer Koenig-improved models of their pistols. You can now have SW1911s with Koenig speed hammers,

for much better trigger pulls. You can have SW1911s with adjustable sights. Doug is consulting with S&W on all aspects of the SW1911, so you can be sure if you get a Doug Koenig model, it has as many refinements in it as the lawyers allow. For those not paying attention, Doug is a superb shot, who has spent a great deal of time learning, and dominating, the Bianchi Cup, now known as the NRA Action Pistol Championships. He's won it ten times (probably more by the time you read this) and has shot more perfect scores than any other shooter. If you want to know about things accurate in the 1911 world, Doug is the first place to go.



A Koenig low-mass hammer, for a light, clean, crisp trigger pull.

Unertl

I know what you're thinking. "Unertl, Unertl, that name sounds familiar...." If you've spent any time reading about firearms in the past, or have been around them long enough, you'll recognize it as the optics company. The company is making the Unertl 10X scope again, the same model that the USMC has been using for the last few decades. The Marines have been so attached to those scopes that they have had the same ones rebuilt again and again, rather than buy new ones. (Then again, anyone who has been paying attention knows what equipment the Marines get: whatever the Navy has worn out and thrown away.) There is usually a budget for repair and overhaul of existing equipment. Rarely is there budget for new gear.

You can own the same model scope the Marines use. But here we're talking about 1911s. What does an optical company know about 1911s? A lot. The bossman of Unertl is Aaron Davis, who used to be in charge of many things military-related at FNH-USA. In addition to the scope, a precision rifle, night sights for handguns in a variety of colors (and even mixed and matched on the same gun) they offer three models of the 1911.

The UCCP, the Unertl Concealed Carry Pistol is a steel commander ready to go out of the box. The DLX is just that, an all bells and whistles single stack full size. Ready to go as a Limited 10 gun, or an IDPA CDP-Division blaster. Last, and the subject of our inquiry and testing is the MEU-SOC. MEU-SOC is the acronym for Marine Corps Expeditionary Unit, Special Operations Capable.

That's the fire brigade; the guys who get sent out first, because there is always one unit ready to go at all times. The MEU-SOC pistol is an all-steel Government Model with a few nice things added. (Which is like saying Angelina Jolie is easy on the eyes.)



The MEU-SOC, with case and magazines.



The rail is plenty strong enough to hold any accessory you'd want on a handgun.



While the barrel is coned and lacks a bushing, the recoil spring system does not use a full-length recoil spring guide rod.

The MEU-SOC comes in a soft case with four Metalform Cobra Mags, test fire target, and in the case of the one sent me a pair of red shop cloths. I get the feeling that not every gun gets the shop cloths, but they did come in handy. The sights are one special and unique feature. The front and rear are in their respective Novak-dimensioned dovetails. Wayne has made himself immortal in this regard. However, the front sight is also unique in that for a production gun it is the only one that actually uses the roll pin. Ever wonder why your Novak sights have a hole in the front? That is so the gunsmith who installs it, once he centers the sight, can drill through into the slide and drive in a roll pin. The roll pin keeps the sight from moving. Many guns have Novak front sights. How many sights actually have the roll pin? Very few. The Unertl does. The rear sight is even more robust than the standard Novak solid sight. The sight is bulky without being blocky, and holds the rear night sight elements. The slide is the standard rounded contour top. The

right side is marked “Unertl Ordnance” and the ejection port is lowered. The external extractor is huge. On the left side the slide is again marked “Unertl Ordnance” centered between the fore and aft cocking serrations.

The barrel is marked “Unertl Ordnance” and uses a cone lockup, with a retained recoil spring capture tube. It does not have an integral ramp, and it does not have a full-length guide rod. The lockup is a broken-in hard stop. When it was new I’m sure you could “pop” it open, and then get the slide to hang up on the bottom lugs cam until you give it a slight jerk forward. Now it takes some force to pop the action open, but you can’t get it to hang up. To say the lockup is bank-vault tight is to insult the MEU-SOC. A bank vault is a tin can compared to the lockup of this barrel. Nothing moves, absolutely nothing, when it is closed.

The frame has an accessory rail, commonly used to hang a tactical light. You could put a laser there, and I have seen a couple of knifeblades rigged to go on accessory rails. But what they all get are lights. The dustcover is wider forward of the slide stop to provide enough strength to take the weight of a light during recoil. The slide stop is nicely contoured. Rather than the typical angled and serrated surface, the Unertl slide stop has a horizontal tab coming out of the slide stop bar. Very positive. The thumb safety is an ambi, and at last, I’ve run into an ambi I can use. The rear of the paddles are tapered in enough that the offside paddle clears my knuckle in my firing grip. The offside safety is held on by means of a conehead end on the hammerpin, and a corresponding dovetail machined into the back of the offside safety plate. You have to take the right grip off to remove the safety, which means the safety can’t fall off unless something breaks. The hammer appears to be a McCormick, but so many people make parts now that you can hardly assign an origin just from looks any more.

The grip safety is Wilson-looking, and requires just about half its travel to clear the trigger. I haven’t had any problems getting it properly depressed. It has a speed bump at the bottom. The trigger is solid, with an overtravel screw. The trigger pull is four and a half pounds but so clean that you might be fooled into thinking it was lighter. As in three pounds, which was the guess one of my testers gave when asked “What do you think the trigger pull is?”

The trigger guard is the proper round shape, and the frontstrap behind the trigger guard is tightly “lifted.” The frontstrap is checkered twenty-four lines to the inch and left proud at the top and bottom. The lines are straight, the diamonds even, the points sharp. In the old days you’d have paid a lot of 1980s-era dollars for checkering half this good. The mainspring housing is flat and checkered, and the checkering there is just as good as that on the frontstrap. At the bottom the mainspring housing continues to a pair of horns sticking forward parallel to the magazine well. Welcome to the S&A magazine funnel. The funnel and frame have been beveled and blended together. At the rear is the lanyard loop. Lanyard loops were quite common. After WWII, and during the early days of IPSC competition, we cut the lanyard loops off of hundreds or thousands of mainspring housings. (I did hundreds myself, so the aggregate of all the gunsmiths out there must be tens of thousands.) Now lanyard loops are back in. In the modern tactical or military environment, the operators who are packing a sidearm have so much gear on them that just taking inventory can take a couple of minutes. And after days of sweat, toil and excitement, anything not tied to you can easily be lost. The last thing you want to lose is a sidearm. Legal issues or military regs aside, if you don’t have it and you need it you are in trouble.

The grips on the MEU-SOC are black synthetic and heavily textured. Very skid-proof. I had had the MEU-SOC for over a month before I went digging into all the pockets in the case, and found a pair of Simonich Gunner grips. Those are even more skid-proof.



The frontstrap is checkered and lifted.



The thumb and grip safety you expect, and Unertl's hell-for-tough rear sight.



You could drive nails with this sight and not hurt it.



You miss that funnel, we'll issue you a white cane. The lanyard loop gives you a means of not losing your issued gear.



The grip safety speed bump, and flat mainspring housing. The Corps thinks flat is best, so expect to see a lot of them in the coming years.



Three-dot night sights with tritium inserts.



The S&A mag funnel, with lanyard loop installed.

The MEU-SOC has that presence impossible to quantify: solidity. When you pick it up, you get the impression that it is the heaviest 1911 you've

ever picked up. It feels solid, and it feels a bit nose-heavy. It feels like a serious piece of machinery, the kind of tool you issue to people whose job it is to go out and shoot other people. Shooting it did nothing to dispel that impression. The feeling of the recoil (again something impossible to quantify) was of a firearm that didn't want to be anywhere except back on target. If you didn't fight it, the MEU-SOC tracked straight back down onto the target. I've shot a lot of 1911s, before and during the work for these two volumes, and the modern production or custom 1911 is the best of the lot. And this is the best of the best.



The front sight is in a Novak dovetail.

You may ask why we cut those lanyard loops off of guns in the old days. We were worried that we'd be banging into them on reloads. (And they didn't look "cool.") We now know how to reload without that worry. Technique and larger basepads keep you off the loop on reloading, and the MEU-SOC reloads fast. As for accuracy, that tight barrel lockup and cone front end deliver the goods. Whoever makes the barrel for Unertl (at the very least someone has to bore and rifle the barrel blanks) does a superb job. And Unertl holds up their end with the barrel fitting. No group I fired exceeded two inches at twenty-five yards. With the load that so many favor, the Oregon Trails 200 grain lead semi wadcutter and Vihtavuori N-310 I could count on groups approaching one inch, with one in particular being slightly under. Not bad for a USMC hammer of Thor.

As an extra test, I decided I'd try the Marine Recon handgun qual course. Unlike competition such as USPSA/IPSC, where the holster is selected for speed and the magazine pouches open, or IDPA where everything must be concealed, I used the Marine qual criteria: a tactical thigh rig and closed mag pouches. And since the sidearm is used in a situation where the main weapon (usually an M-4 carbine or M-16A2 or – A4) has either malfunctioned or run out of ammo, I put on a Colt M-4 using a tactical sling. If you skipped over this course earlier in the book, go back and read it. It sounds easy, until you remember that every string has you dry-firing the M-4 as if you were trying to fire it, and suddenly realized that it was either empty or malfunctioning. And one of the strings calls for a weak-hand draw. A weak-hand draw used to be a staple of Standards stages in IPSC 20-plus years ago. We came up with some pretty wild (and even a tad hazardous) ways to get a handgun out of the holster, weak-hand only.



The slide stop is the “shelved” style, which I’m really starting to like.



The Unertl and one of its complement of Cobramags.



Open, the Unertl shows its lack of a guide rod. No problem, John Moses didn't feel the need, either.



Me, getting ready to shoot the USMC Recon qual course. It is not an easy course, don't expect to just breeze through it.

After a few attempts, I finally managed to shoot a qualifying score. But it wasn't easy. If you want to try it, I'd suggest building up to it: try each stage as a separate training exercise, and record your score and time. Once you can do each of them in time and for good hits, then try going through the whole course in an afternoon.

You may want a 1911 that has a "known" name, something everyone will recognize. If you pass on the Unertl, you'll be passing on a first-class 1911.

Wilson CQB

Yes, you are looking at the same CQB, five years after the first volume. I hadn't planned on hanging on to it, it just happened. When the first book was done, I was packing up the guns to ship back when one of my testers expressed an interest in the CQB. Manufacturers are quite often happy to sell a demo gun. They can get something for it, and not have to overhaul it and then either send it off to the next gun writer, or sell it as a used gun. I've seen manufacturers at big matches like the USPSA Nationals with demo guns for sale. Sometimes at very attractive prices. So I didn't ship it right back. The tester then had a personal emergency that put a hold on any extra expenditures. By then I was onto the next book, and the CQB sat on the shelf. By the time it was warm again, I was headed off to various law enforcement classes to teach, so I took it along. It was useful in failure and transition drills and in teaching new shooters. (There's nothing like an utterly dependable and accurate firearm to bolster the confidence of a new shooter.)

I did some reloading work using it as the test mule. I hauled it to classes. I shot a few matches with it. The member of my test crew ended up moving, and never bought the gun. By then I was so accustomed to using it, that when I next talked to my contact at Wilson Combat, he said "Hey, if you've got a use for it, hang on to it until you're done." I did have a use for it, and ended up using it in several magazine articles. And shot it a lot.

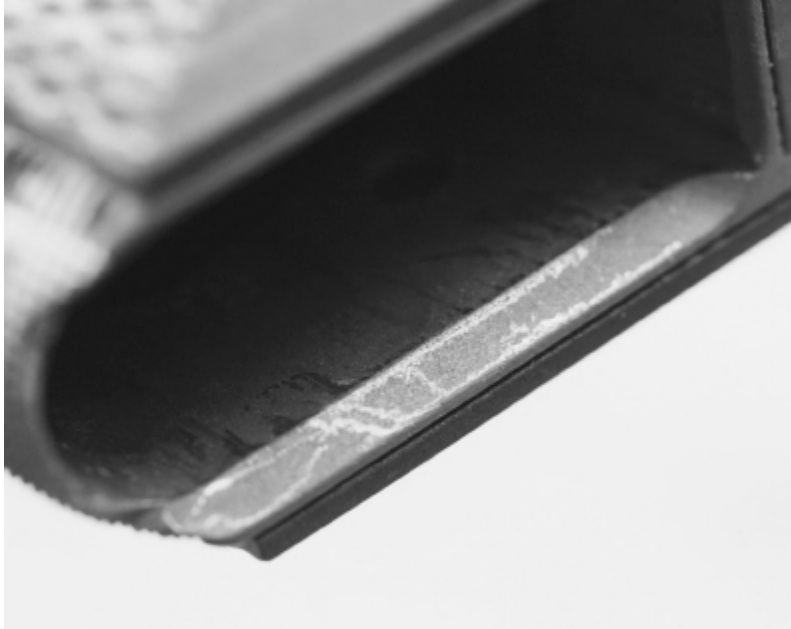
When it came time to work on this volume, I found I had put over 30,000 rounds through it. (A slow pace. Back in my competition days, I'd have done that in one year, not five.) The number of failures was not zero, but it was such a low number I really couldn't remember. Had it failed twice? Three times? And was that a magazine problem back then that caused those problems? Or was it ammo? Geez, I've really got to start writing this stuff down in a more organized fashion.



Bill Wilson was one of the first gunsmiths who started making his own parts. Because of him we have such choices today that our heads are dizzy.



Running over it with my truck? Piece of cake, the CQB just kept on running.



Some spots, like the mag well, show some mileage. But mostly it looks pretty good for a high-mileage gun.



You do some mud and dust tests, you expect mud to get stuck in the checkering. It'll wash out.



The thumb safety has been scuffed a bit, but still works just fine.

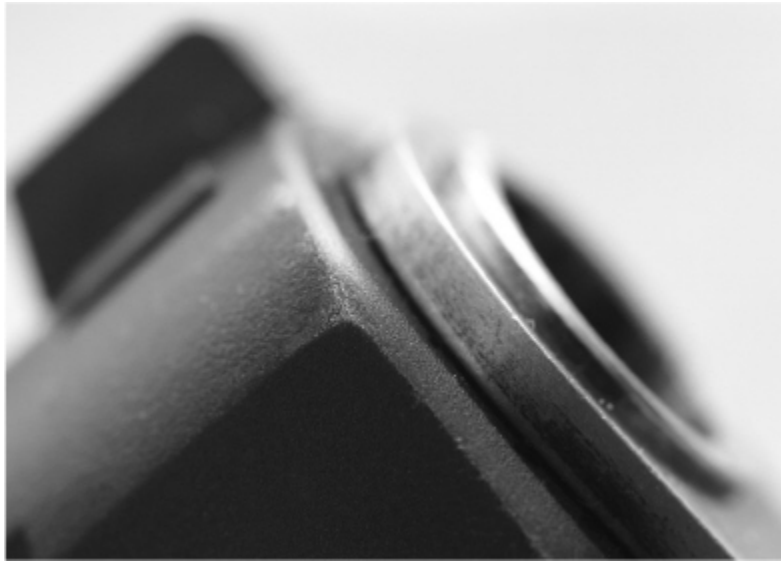


Of course a Wilson 1911 gets a Wilson barrel. Don't be daft.

I then subjected it to abusive testing as you read about in Chapter Four. I buried it in dirt and mud, I fired it after soaking it, and I even fired it under water. I sent the extractor off to Ned, who simulated a “Bubba load” (slide closing on a chambered round) for 60,000 cycles. After it came back not showing any change, I fired a carton of Wolf steel-cased ammo through it in one afternoon without failures to show for it.

In the years it has been with me, it has been used in training, competition, practice and reloading development. It has been in countless holsters, drawn and fired (and dry-fired) endlessly. My best guess is that

something on the order of fifty people have shot this particular 1911. None have found cause for a complaint. It has been cleaned and not cleaned. In the process of cleaning, it has been cleaned with regular firearms cleaning solvents, Brownells D'Solve, Cylinder & Slide Dunk-Kit, soap and water, diesel fuel, hydraulic fluid, synthetic motor oil and swamp water. It has been lubed with firearms oil, motor oil, WD-40, Teflon, sunscreen and shot without any lube at all. It has been through a couple of 1911 armorers classes, where it was disassembled and reassembled hourly.



The CQB has been in and out of holsters a few times, and the corners of the slide show it.



First time under the dirt. More trips to come, and none kept it from working.



Shooting the CQB underwater was anticlimactic. It just worked.



After mud and dust, dirt and sand, it was time for a refreshing dip in Cylinder & Slide Dunk-it.

In all that it has soldiered on without fail. Now we look at it not to see it as a new firearm, but to see how it has held up under all that use. (And abuse.)

The sights have not budged. The CQB is still zeroed to the same point of aim as it was five years ago, at least as much as I can tell, not having any of that ammo still on hand. (Turn a group of test-shooters loose, and all the ammunition will be consumed in short order. Just a warning, should you be in such a situation.) The night sights seem to have lost a bit of their brightness, but I can't be sure. I have no way of measuring the actual brightness of the capsules, so I have only my memory to go on. Perhaps I have a little better night vision then, or more likely they have faded. But they are still bright enough to work just fine, and bright enough to be seen in a darkened room in the daytime.

The finish has held up remarkably well. When you consider that part of the recent abuse was to shoot it while covered in dirt or mud, the finish is quite solid. The black has been very slightly rubbed though on the front edges of the slide. Those corners receive the most wear, going in and out of holsters, and it isn't uncommon for a 1911 to have those edges worn down to bright steel. The top line of the slide flat is also just starting to show bright through the finish. The frame has held up better, probably due to less contact with holsters. The trigger shows its wear, but they all do, and all do

so soon after you start firing. The outside edge of the thumb safety is starting to show bright metal through the finish. The checkering is still sharp, and the finish not worn off of the diamonds yet. The grips have held up well, but then I'm not one to abuse grips just because they can be easily changed. Once I'd hosed the dirt and mud out, the trigger pull returned to a nice clean and crisp four pounds. The finish on the mag funnel bevels is a bit chewed up, but considering how many magazines have been in and out of that magazine well, it is almost pristine compared to some mag wells of competition shooters.

The fit of the barrel and slide are almost unchanged from day one. The slide seems a bit smoother, but it was already smooth to begin with. The barrel locks up tight. The bushing is a bit easier to remove, but it is not anywhere near loose. The top of the chamber of the barrel shows the typical rubbing that any 1911 that has been fired gets. The rubbing isn't any heavier than many of the new guns I tested for this book, that have had 500 to 1,000 rounds through them.

In the time I've been using it, I've changed the recoil spring three or four times. It hasn't had more than 10,000 rounds per spring, and it hasn't failed to work in that time. It came with a Wilson shock buff installed, and several more in the case. Each new spring got a new shock buff.

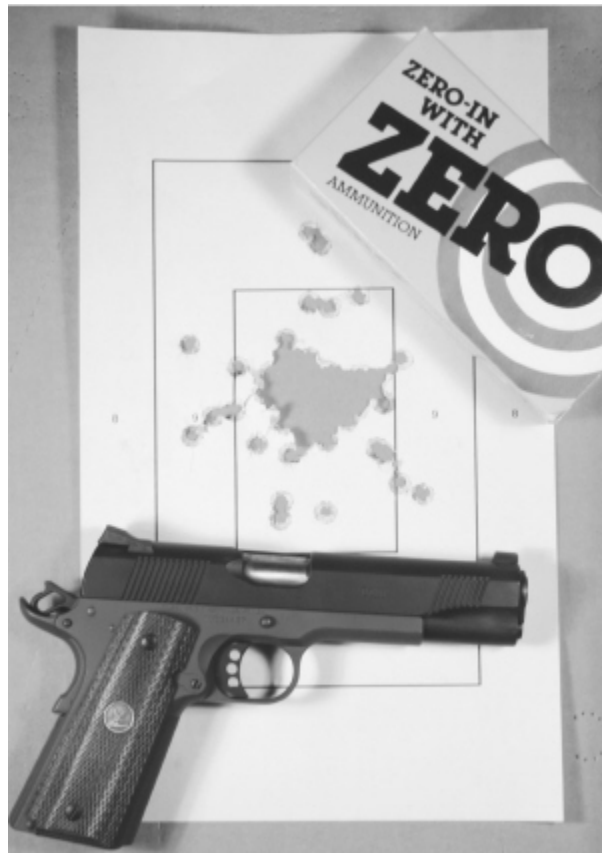
How does it shoot? As well as it did in the beginning. When I 'm shooting over sandbags, I can keep all my shots herded together in a group at or under three inches. In the Ransom rest it will do better. All that shooting and abuse do not seem to have diminished its abilities. The last test was to show it off. I scrubbed the mud and powder residue off, and lubed it up. Once I'd cleaned it up, I showed it to the new crew of test-shooters. A couple of them thought it was new. The rest could see it had been used, but none came even close to guessing how much ammo had gone through it.



Just one days ammo for the CQB, over the years.



The CQB, a Wilson AR-15, web gear, and ammo. What else do you need in an emergency? Oh yes, a cell phone to call for assistance.



The Illinois qual course, as fired in the south suburbs. Five hits out of the center box, all on paper.

For those who wonder if an expensive gun can possibly be worth it, consider this CQB. It has well over 30,000 rounds through it. The extractor has had 60,000 cycles more than that. It hits to the sights, it shoots accurately, and it never fails. If I had to go out the door armed, I'd have no hesitation in loading up this CQB and holstering it for the trip. If you're wondering about cost, if we assume that you fire half reloads and half factory hardball, and that the average cost of your ammunition is \$125 per thousand rounds, this CQB has fired over \$3700 worth of ammunition. Had you bought a less-expensive gun, you would have saved some money. But how much of that savings would have gone into additional gunsmithing?

Repairs? Wasted matches and wasted training, due to your lesser gun being out of service? No, money spent on quality is hardly ever misspent.

That said, I probably should ask Bill just how much he wants for this used gun of his.

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